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DATA REPORT, VOLUME I, VELOCITY AND TEMPERATURE PROFILE DATA FO--ETC(1)

F49620-78-C-0064

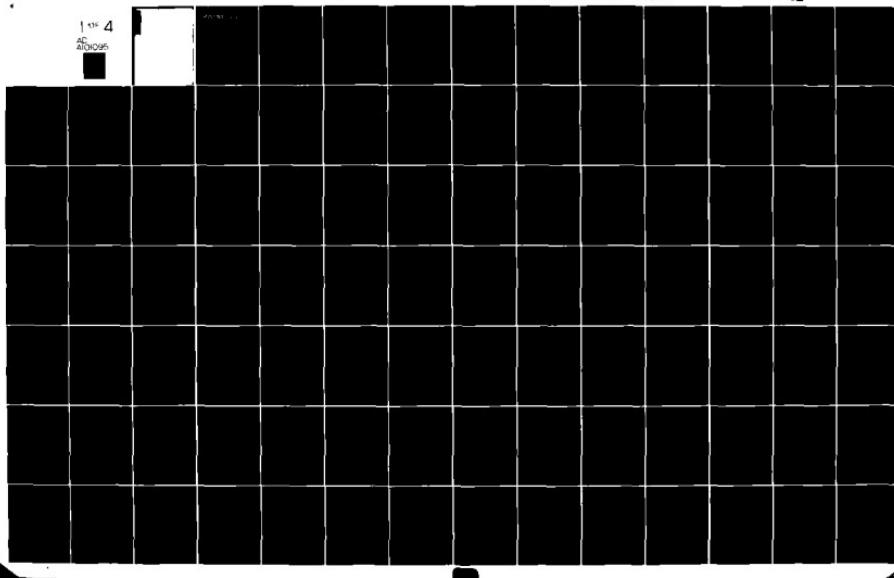
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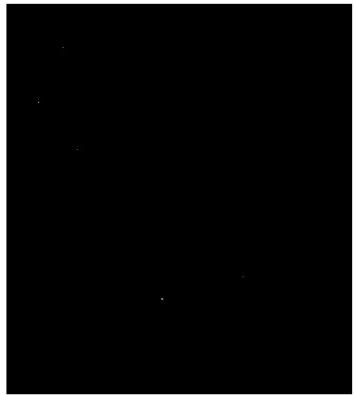
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East Hartford, Connecticut 06108

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6 Data Report. Velocity
and Temperature Profile Data for Zero
Pressure Gradient, Fully Turbulent
Boundary Layers.

Contract No. F49620-78-C-0064

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REPORTED BY

M J Blair

M. F. Blair

APPROVED BY

M J Werle

M. J. Werle

A

DATE January 1981

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profile data for the individual boundary layer traverses are presented in
this report.

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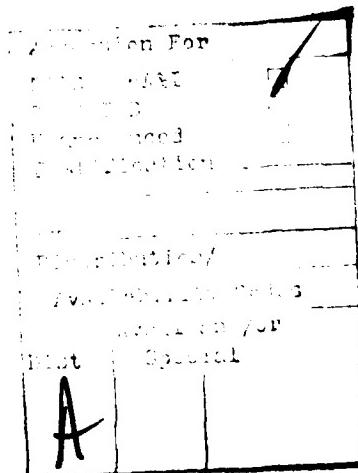
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~~_____~~ Data Report - Vol. I
Velocity and Temperature Profile Data for
Zero Pressure Gradient, Fully Turbulent Boundary Layers

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FOREWORD

This report was prepared for the Air Force Office of Scientific Research, United States Air Force by the United Technologies Corporation Research Center, East Hartford, Connecticut, under Contract F49620-78-C-0064, Project Task No. 2307/A4 61102 F. The performance period covered by this report was from 1 June 1978 to 31 January 1981. The project monitors were Dr. D. G. Samaras and Dr. James Wilson.

INTRODUCTION

Experimental research has been conducted to determine the influence of a free-stream turbulence on zero pressure gradient, fully turbulent boundary layer flow. Convective heat transfer coefficients, boundary layer mean velocity and temperature profile data and wall static pressure distribution data were obtained for five flow conditions of constant free-stream velocity and free-stream turbulence intensities ranging from approximately $\frac{1}{4}\%$ to 7%. Free-stream multi-component turbulence intensity, longitudinal integral scale, and spectral distributions were obtained for the various turbulence levels. A comprehensive report containing a description of the experimental equipment, a presentation of the reduced data and an analysis of the results is available in Ref. 1. In Ref. 1 it has been shown that the test results with $\frac{1}{4}\%$ free-stream turbulence are in excellent agreement with classic two-dimensional, low free-stream turbulence, turbulent boundary layer correlations, thus establishing the absolute accuracy of the experiment. The data obtained for the test cases with higher free-stream turbulence indicate that the turbulence has a significant effect on turbulent boundary layer skin friction and heat transfer. It has also been shown in Ref. 1 that these effects are a function of the free-stream turbulence intensity, the turbulence length scale, and the boundary layer momentum thickness Reynolds number. Suggested correlations for the influence of free-stream turbulence on skin friction, heat transfer, and the Reynolds analogy factor are given.

Mean velocity and temperature profile data for the individual boundary layer traverses are presented in this report.

DESCRIPTION OF BOUNDARY LAYER DATA REDUCTION SYSTEM

A computer program has been written which reduces, plots, and tabulates the velocity and temperature boundary layer profile data obtained by the UTRC Boundary Layer Wind Tunnel Data Acquisition System. Following is a brief description of this reduction program.

(a) Mean velocities (U) are measured with miniature flattened pitot probes. These velocities are corrected for probe Reynolds number and wall blockage effects using the results of Refs. 2, 3, and 4. Except for those measurements extremely close to the wall ($y \sim < 0.010$ in.) the corrections were less than 1% of the measured velocity. The maximum velocity correction (5%) resulted for the case of the probe touching the wall.

(b) Friction velocities (U_τ) for each profile are determined by a least squares fit of the velocity profile data from $50 \sim y \sim 500$ to the "law-of-the wall".

$$\frac{U}{U_\tau} = \frac{1}{K} \ln \frac{yU_\tau}{\nu} + C \quad (1)$$

where $K = 0.41$

$C = 5.0$

as recommended by Coles (Ref. 5).

Using this value of U_τ the velocity and temperature data are plotted in universal coordinates $U^+ = \frac{U}{U_\tau}$ and $\theta^+ = \frac{(1 - \frac{U}{U_\tau}) \rho_w C_p \sqrt{\tau_w / \rho}}{q^*} \frac{dy}{\nu}$ vs. $y^+ = \frac{yU_\tau}{\nu}$. The velocity profile data are compared with Eq. (1) and the temperature data with Eq. (2).

$$\theta^+ = Pr_t \left(\frac{1}{K} \ln y^+ + C + P_s \right) \quad (2)$$

where $Pr_t = 0.9$

$K = 0.41$

$C = 5.0$

$P_s = -2.0$

(c) The following integral properties are determined

(i) displacement thickness

$$\delta^* = \int_0^\delta \left(1 - \frac{\rho U}{\rho_e U_e} \right) dy$$

(ii) momentum thickness

$$\theta = \int_0^\delta \frac{\rho U}{\rho_e U_e} \left(1 - \frac{U}{U_e} \right) dy$$

(iii) energy-dissipation thickness

$$\delta^{**} = \int_0^\delta \frac{\rho U}{\rho_e U_e} \left(1 - \frac{U^2}{U_e^2} \right) dy$$

(iv) enthalpy thickness

$$\delta_H = \int_0^{\delta_1} \frac{\rho U}{\rho_e U_e} \left(\frac{T - T_e}{T_e} \right) dy$$

(v) kinematic displacement thickness

$$\delta_K^* = \int_0^\delta \left(1 - \frac{U}{U_e}\right) dy$$

(vi) kinematic momentum thickness

$$\theta_K = \int_0^\delta \frac{U}{U_e} \left(1 - \frac{U}{U_e}\right) dy$$

(vii) Clauser delta

$$\Delta = \int_0^\delta \left(\frac{U_e - U}{U_\tau}\right) dy$$

(viii) Clauser shape parameter

$$G = \frac{1}{\Delta} \int_0^\delta \left(\frac{U_e - U}{U_\tau}\right)^2 dy$$

Measurement of velocity profile data very close ($y^+ < 30$) to a wall is difficult because of the extremely large local velocity gradients and the finite probe tip size. For the velocity profiles measured in this program a flattened impact probe with a probe tip height of approximately 0.007 in. is employed. This tip height corresponds to $\Delta y^+ \approx 10$ for most of the profiles (depending on the individual profile U_τ). Because the true distance from the wall to the effective center of the probe tip is uncertain (uncertainty of approximately ± 0.001 in.) the recommendation of Coles (Ref. 6) has been followed and the integral thicknesses are evaluated using standard sublayer functions very close to the wall. For values of $y^+ < 35$ (approximately three probe tip heights) the integral thicknesses are evaluated using the standard velocity sublayer and buffer zone function of Burton (Ref. 7).

$$y^+ = U^+ + \left(\frac{U^+}{0.74}\right)^7 \quad (3)$$

The thermocouple boundary layer probes are constructed with 0.001-in.-dia sensing elements. Because of this design, accurate temperature data can be obtained very close to the wall (for some profiles even within the viscous sublayer). For this reason it has been possible to use measured temperature data for evaluation of the integral thicknesses from $y^+ = 5$ to the edge of the boundary layer. For $y^+ < 5$ (viscous sublayer) the integral thicknesses are evaluated using Eq. (4).

$$f^+ = Pr U^+ \quad (4)$$

(d) The profile "wake strength" (Π) is determined from an iterative solution of two "local friction law" formulations from Coles (Ref. 6).

$$(i) \quad \frac{U_e}{U_\tau} = \frac{1}{\kappa} \ln \frac{8U_\tau}{\nu} + C + \frac{2\Pi}{\kappa}$$

$$(ii) \quad \left(\frac{\frac{8U_e}{\nu} - 65}{\frac{8U_\tau}{\nu}} \right) = 1 + \Pi$$

Since the term $\frac{U_e}{\delta}$ can be eliminated from Eqs. (i) and (ii) all that is required to solve for Π are values of U_e , U_τ , and δ^* .

The wake component

$$w = \frac{\kappa}{\Pi} \left[\frac{U}{U_\tau} - \left(\frac{1}{\kappa} \ln y^+ + c \right) \right] \quad (5)$$

is plotted vs. $\frac{y}{\delta}$ and compared to Coles (Ref. 6) zero pressure gradient wake function

$$w = 2 \sin^2 \left(\frac{\pi}{2} \frac{y}{\delta} \right) \quad (6)$$

(e) Defect velocities are calculated using the value of U_τ determined in (b).

$$\text{Velocity defect} = \frac{U - U_e}{U_\tau}$$

The velocity defect distribution is plotted vs. $\frac{y}{\delta}$ and compared with inner and outer region defect correlations.

(i) In the inner region ($\frac{y}{\delta} < 0.2$) with the correlation of Schubauer and Tchen (Ref. 8).

$$\frac{U - U_e}{U_\tau} = \frac{1}{\kappa} \ln \left(\frac{y}{\delta} \right) - 2.35 \quad (7)$$

(ii) in the outer region ($\frac{y}{\delta} > 0.2$) with the correlation of Hama (Ref. 9)

$$\frac{U - U_e}{U_\tau} = -9.6 \left(1 - \frac{y}{\delta} \right)^2 \quad (8)$$

(f) The following is a list of all plots constructed, including those discussed in parts (b), (d), and (e):

i) $\frac{U}{U_e}$ vs $\frac{y}{\delta}$

ii) $\frac{T_w - T}{T_w - T_e}$ vs $\frac{y}{\delta}$

iii) U^+ vs y^+ (see b)

iv) T^+ vs y^+ (see b)

v) $\frac{U-U_e}{U_\tau}$ vs $\frac{Y}{\delta}$ (see d)

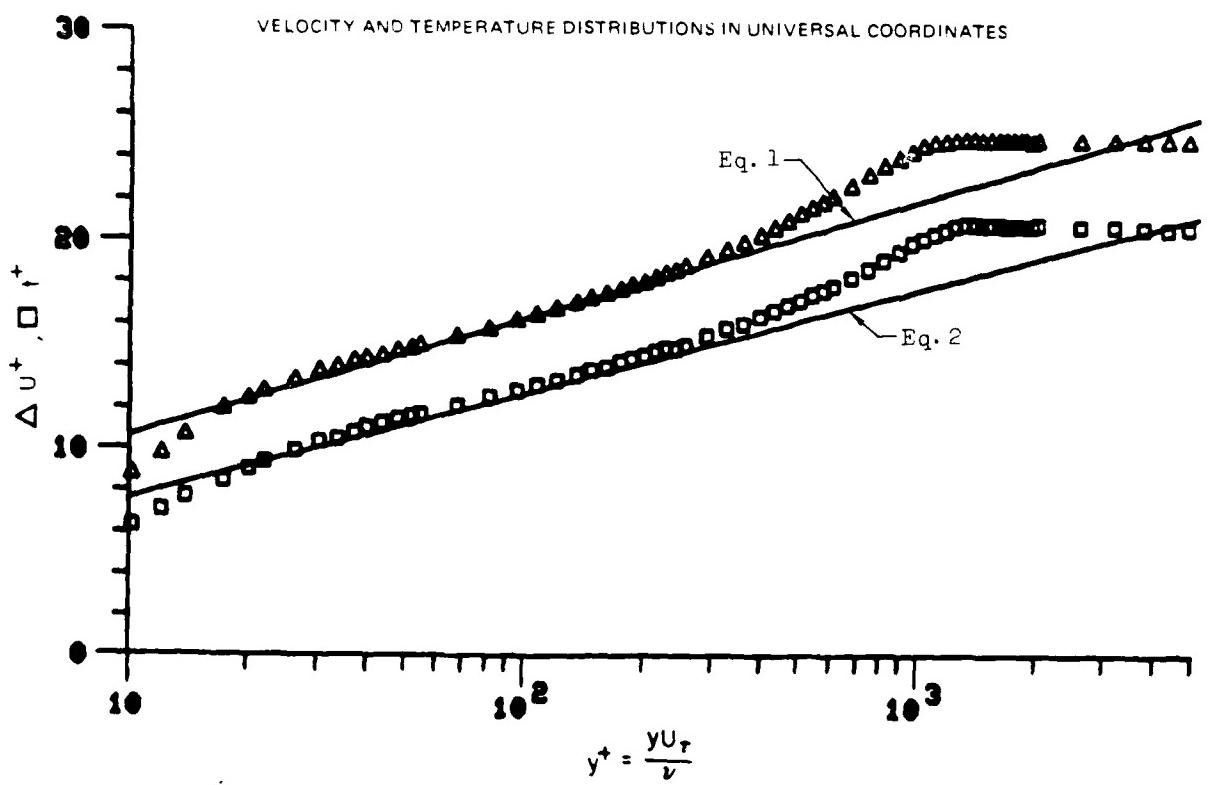
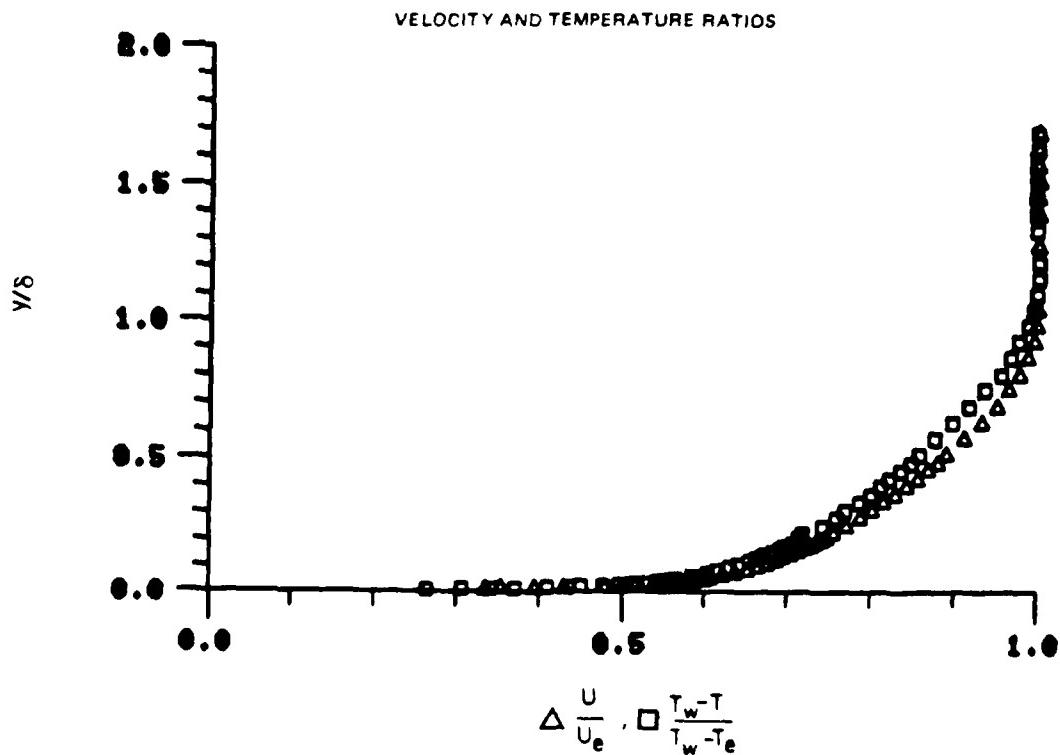
vi) w vs $\frac{y}{\delta}$ (see e)

(g) The following boundary layer values are tabulated

$$y, \frac{y}{\delta}, U, T, \frac{U}{U_e}, \frac{T_w - T}{T_w - T_e}, \frac{U - U_e}{U_\tau}, U^+, Y^+, T^+$$

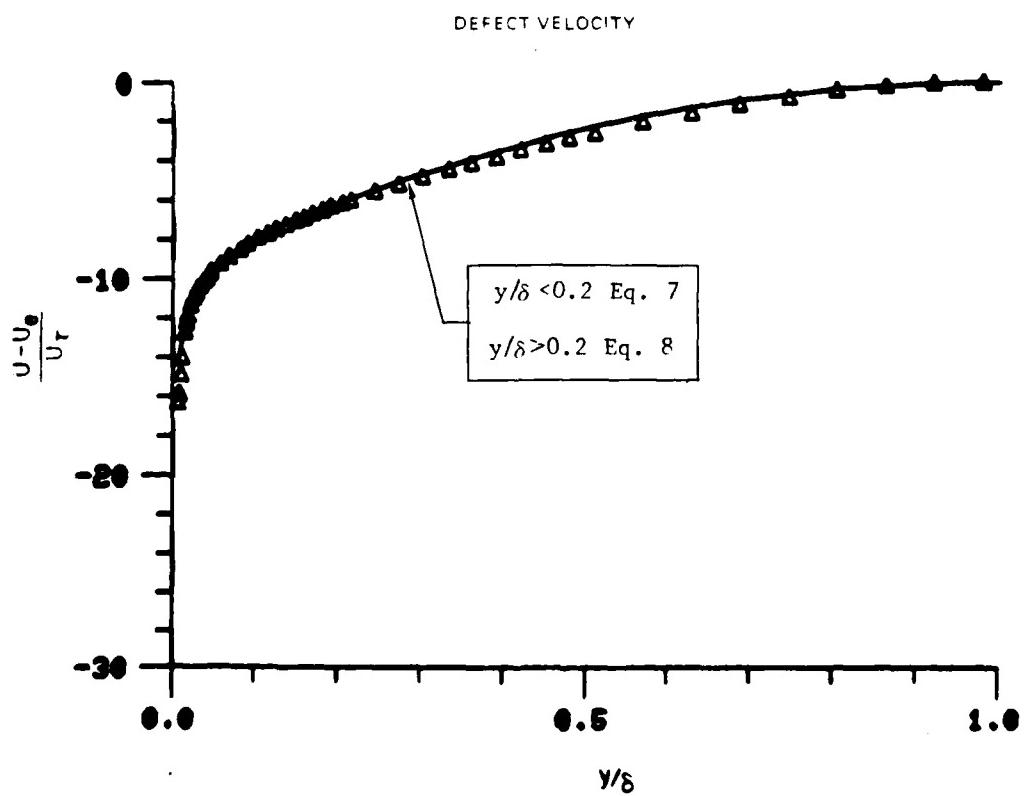
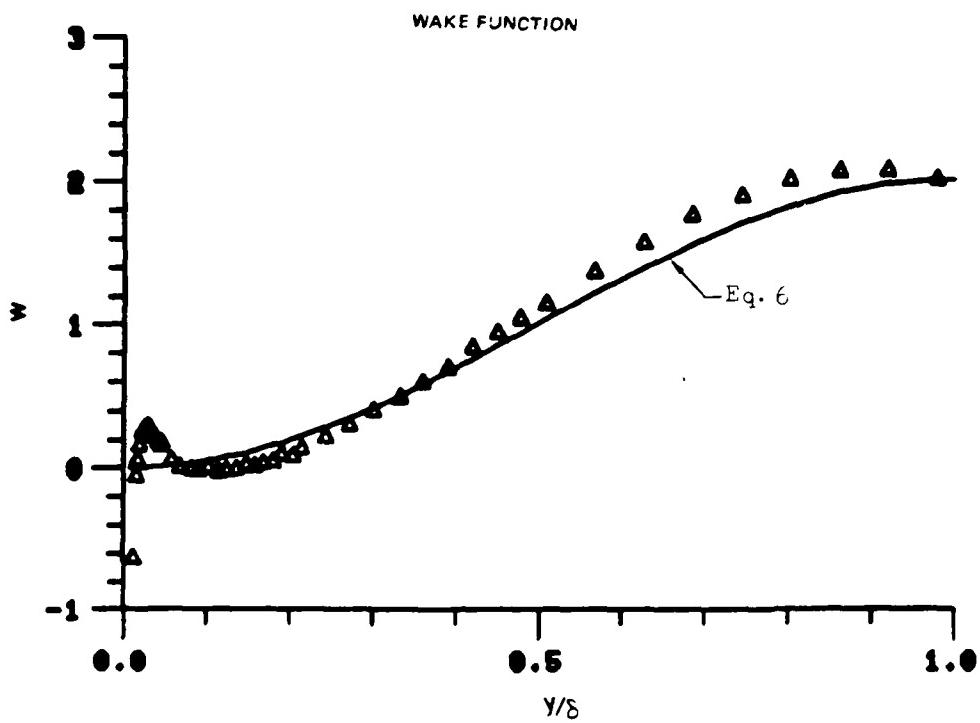
Sample reduced boundary layer profile data

Typical mean velocity and temperature boundary layer profile data obtained in the UTRC Boundary Layer Wind Tunnel with the test section adjusted for zero pressure gradient flow are presented in the following example figures. For these example figures the various analytical curves are labeled with their respective equation numbers.



Example Profile Plot A - Typical Boundary Layer Velocity and Temperature Profiles

78-12-100-1



Example Profile Plot B - Typical Boundary Layer Velocity Profiles

78-12-100-2

LIST OF TABLES AND FIGURES

Table & Figure No.	Grid No.	Run No.	Point No.	X (inches)	Ref
No Grid (minimum T)					
1		5	1	12.3	490
2		5	2	12.3	500
3		5	3	12.2	480
4		5	4	36.2	2648
5			5	36.2	2691
6			7	40.3	2968
7			8	40.3	3020
8			11	46.2	3333
9			13	52.2	3893
10			14	60.3	4399
11			16	60.3	3827
12			17	68.2	5017
13			18	76.2	5576
14			19	76.2	5574
15			20	76.2	5042
16			21	84.1	6072
17	2	8	3	20.2	1385
18			4	20.2	1530
19			5	20.2	1370
20			7	28.2	2332
21			9	36.2	2812
22			10	44.3	3402
23			13	52.2	4084
24			14	60.3	4608
25			15	60.3	5020
26			16	60.3	4900
27			17	68.4	5162
28			18	76.2	5791
29			20	76.2	6121
30			21	84.1	6402
31	2	7	3	12.2	1069
32			4	12.2	1069
33			5	12.2	1108
34			6	12.2	1035
35			8	28.2	2638
36			9	28.2	2701
37			10	28.2	2603
38			11	36.1	3336
39			12	44.3	3950
40			13	44.3	4022
41			14	44.3	4049
42			15	52.2	4657
43			17	60.2	5313
44			18	60.2	5294
45			20	68.2	5850
46			22	76.2	6609
47			23	76.2	6687
48			24	84.1	7033
49	3	10	1	12.0	1411
50		10	2	12.1	1482
51		10	3	12.1	1446
52		6	7	28.3	3059
53		10	4	28.2	3226
54		6	11	36.3	3731
55		6	12	44.4	4269
56		10	6	44.2	4629
57		6	15	52.2	4942
58		10	7	60.1	5890
59		6	18	60.3	5916
60		6	19	68.3	6247
61		10	9	76.2	7386
62		10	10	76.2	7159
63		6	24	84.2	7567
64	4	9	3	12.2	1313
65			4	12.2	1496
66			5	12.2	1444
67			6	20.2	2056
68			7	28.2	2814
69			8	28.2	3092
70			10	36.1	3535
71			12	44.2	4541
72			14	52.3	4919
73			16	60.2	5732
74			17	60.2	5796
75			18	68.2	6226
76			19	76.2	6751
77			20	76.2	7049
78			21	76.2	6836
79			22	84.0	6988

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6. Coles, D. E.: Proceedings, Computations of Turbulent Boundary Layers - 1968, AFOSR-IFP, Stanford Conference, Vol. II, 1968.
7. Burton, R. A.: A Simple Universal Velocity Profile Equation, AIAA Journal 3, 1965.
8. Schubauer, G. B. and Tchen, C. M.: "Turbulent Flow" in Turbulent Flows and Heat Transfer, High Speed Aerodynamics and Jet Propulsion, Vol. 5, Princeton University Press, Princeton, N. J., 1959.
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JOB KLD32 TAPE 3166R- FILES 01-21, RUNS 5.01-5.21 03/09/79

RUN NO. 5. POINT 1. NO GRID

BOUNDARY LAYER PROPERTIES

		STANDARD SUBLAYERED INTERPOLATION FUNCTION FROM TO WALL WALL TO Y+=35
FREE STREAM VELOCITY	=	99.325
FREE STREAM TEMPERATURE	=	68.384
WALL TEMPERTRATURE	=	103.130
WALL HEAT FLUX	=	.04603
FREE STREAM DENSITY	=	.07613
FREE STREAM KINEMATIC VISCOSITY	=	.0001602
DENSITY OF FLUID AT WALL	=	.07143
KINEMATIC VISCOSITY OF FLUID AT WALL	=	.0001793
WALL/FREE STREAM DENSITY RATIO	=	.93826
LOCATION REYNOLDS NUMBER (REX)	=	634473.96
INPUT VALUE OF VELOCITY DELTA	=	.09300
INPUT VALUE OF TEMPERATURE DELTA	=	.10000
CALCULATED DELTA	=	.08530
DELTA 9.5% INPUT	=	.00000
DISPLACEMENT THICKNESS (DELSTAR)	=	.02631
MOMENTUM THICKNESS (THETA)	=	.00954
ENERGY-DISSIPATION THICKNESS	=	.01519
ENTHALPY THICKNESS	=	.00057
SHAPE FACTOR 12 (DFLSTAR/THETA)	=	2.75564
SHAPE FACTOR 32 (ENRGY/THETA)	=	1.59122
MOMENTUM THICKNESS REYNOLDS NUMBER	=	.493.14
DISPLACEMENT THICKNESS REYNOLDS NUMBER	=	1359.41
SKIN FRICTION COEFFICIENT	=	.003000
FRICITION VELOCITY	=	3.97120
LAW OF THE WALL CONSTANT (K)	=	.41000
LAW OF THE WALL CONSTANT (C)	=	5.00000
WAKE STRENGTH	=	1.57280
CLAESERS "DELTA" INTEGRAL	=	-.49291
CLAUSERS "G" INTEGRAL	=	6.78282
DISPLACEMENT THICKNESS - CONSTANT DENSITY	=	.9.97876
MOMENTUM THICKNESS - CONSTANT DENSITY	=	.02272
SHAPE FACTOR 12 - CONSTANT DENSITY	=	.00979
		.01122
		1.96677

LOCATION -X- 12.28000

Z = CENTERLINE

Table 1.

JOB KLD02 TAPE 3166R- FILES C1-21, RUNS 5.01-5.21 03/09/79

RUN NO. E. POINT 1. NO GRID

REDUCED PROFILE DATA

N	INCHES	Y'	U	DELT A	FT/SEC	T	U/U'	THFTA	UTAU	U(+)	T(+)	Y(+)
1	.0060	.C71	E.82	95.26	.089	.140	-22.797	2.215	7.203	11.130		
2	.0060	.CF1	11.73	97.50	.118	.150	-22.556	2.985	8.237	12.791		
3	.0079	.C03	14.80	96.70	.149	.195	-21.286	3.726	9.615	14.637		
4	.0097	.114	20.47	95.09	.206	.231	-19.857	5.154	11.890	17.959		
5	.0112	.147	24.97	95.89	.281	.266	-18.723	6.288	13.565	20.728		
6	.0122	.143	2F.10	93.11	.283	.268	-17.921	7.090	14.823	22.574		
7	.0135	.162	31.67	91.67	.319	.230	-17.038	7.974	16.950	22.527		
8	.0161	.189	36.78	89.64	.370	.388	-15.749	10.285	19.949	29.772		
9	.0179	.210	40.94	88.29	.411	.427	-14.727	11.209	21.045	33.094		
10	.0210	.247	44.57	86.90	.452	.470	-13.713	11.927	24.155	36.417		
11	.0210	.247	47.36	85.77	.477	.499	-13.085	12.209	25.669	38.816		
12	.0210	.517	51.79	84.41	.516	.542	-12.096	12.915	27.843	42.508		
13	.0249	.292	55.07	92.95	.554	.581	-11.145	13.866	29.840	46.015		
14	.0272	.717	58.45	81.53	.590	.622	-10.244	14.766	31.643	49.291		
15	.0351	.412	61.62	80.44	.621	.658	-9.479	15.633	33.550	53.720		
16	.0419	.572	65.44	73.03	.723	.758	-6.627	18.045	36.936	64.841		
17	.0419	.727	67.72	71.79	.811	.840	-4.732	20.040	43.189	77.208		
18	.0419	.572	71.62	76.00	.823	.902	-2.923	22.048	46.354	90.128		
19	.0419	.572	73.03	73.79	.929	.941	-1.775	23.236	48.352	101.756		
20	.0419	.727	76.44	70.44	.962	.968	-0.953	24.056	49.763	114.492		
21	.0419	.727	79.47	60.43	.981	.984	-0.466	24.545	50.540	127.412		
22	.0419	.727	80.40	97.40	.991	.991	-0.219	24.793	50.047	138.467		
23	.0419	.727	80.40	97.40	.996	.996	-0.050	24.931	51.273	151.592		
24	.0419	.727	80.40	97.40	.999	.999	-0.017	25.026	51.361	164.143		
25	.0419	.727	80.40	97.40	1.001	1.000	-0.003	25.033	51.414	175.587		
26	.0419	.727	80.40	97.40	1.000	1.000	-0.009	25.043	51.397	186.076		
27	.0419	.727	80.40	97.40	1.000	1.000	-0.042	25.054	51.392	200.073		
28	.0419	.727	80.40	97.40	1.000	1.000	-0.031	25.064	51.389	212.686		
29	.0419	.727	80.40	97.40	1.000	1.000	-0.015	24.927	51.392	225.607		
30	.0419	.727	80.40	97.40	1.000	1.000	-0.016	24.966	51.378	238.158		
31	.0419	.727	80.40	97.40	1.000	1.000	-0.033	24.979	51.353	252.005		
32	.0419	.727	80.40	97.40	1.000	1.000	-0.124	24.982	51.361	334.506		
33	.0419	.727	80.40	97.40	1.000	1.000	-0.307	25.055	51.271	367.367		
34	.0419	.727	80.40	97.40	1.000	1.000	-0.220	25.091	51.234	398.738		
35	.0419	.727	80.40	97.40	1.000	1.000	-0.001	25.001	51.233	432.146		
36	.0419	.727	80.40	97.40	1.000	1.000	-0.226	24.985	51.259	463.340		
37	.0419	.727	80.40	97.40	1.000	1.000	-0.119	24.963	51.268	496.198		
38	.0419	.727	80.40	97.40	1.000	1.000	-0.326	24.987	51.349	527.572		
39	.0419	.727	80.40	97.40	1.000	1.000	-0.75	24.937	51.255	561.534		
40	.0419	.727	80.40	97.40	1.000	1.000	-0.78	24.934	51.262	582.266		
41	.0419	.727	80.40	97.40	1.000	1.000	-0.67	24.945	51.163	594.558		
42	.0419	.727	80.40	97.40	1.000	1.000	-0.14	24.808	51.113	604.4832		
43	.0419	.727	80.40	97.40	1.000	1.000	-0.66	24.946	51.155	4743.828		
44	.0419	.727	80.40	97.40	1.000	1.000	-0.125	24.886	51.097	5545.254		
45	.0419	.727	80.40	97.40	1.000	1.000	-0.94					
46	.0419	.727	80.40	97.40	1.000	1.000	-0.94					

Table 1.

JOB KLDC2 TAPE 3166R- FILES 01-21, RUNS 5.01-5.21 03/39/79

RUN NO. 5. POINT 2. NO GRID

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO Y=35
FREE STREAM VELOCITY	99.196	99.196
FREE STREAM TEMPERATURE	68.609	
WALL TEMPERATURE	102.920	
WALL HEAT FLUX	.04665	
FREE STREAM DENSITY	.07610	
DENSITY OF FLUID AT WALL	.07146	
KINEMATIC VISCOSITY OF FLUID AT WALL	.0001792	
WALL/FREE STREAM DENSITY RATIO	.93901	
LOCATION REYNOLDS NUMBER (REX)	633186.30	
INPUT VALUE OF VELOCITY DELTA	.09200	
INPUT VALUE OF TEMPERATURE DELTA	.09500	
CALCULATED DELTA		.09485
DISPLACEMENT THICKNESS (DELSTAR)	.02631	.02236
MOMENTUM THICKNESS (THETA)	.00975	.01103
ENERGY-DISSIPATION THICKNESS	.01544	.01783
ENTHALPY THICKNESS	.00058	.00077
SHAPE FACTOR 12 (DELSTAR/THETA)	2.69874	2.02599
SHAPE FACTOR 22 (ENERGY/THETA)	1.58341	1.61633
MOMENTUM THICKNESS REYNOLDS NUMBER	502.66	568.93
DISPLACEMENT THICKNESS REYNOLDS NUMBER	1356.56	1152.65
SKIN FRICTION COEFFICIENT	.003513	
FRICITION VELOCITY	4.29000	
LAW OF THE WALL CONSTANT (K)	.41000	
LA. OF THE WALL CONSTANT (C)	5.00000	
WAKE STRENGTH		1.09360
CLAUSERS "DELTA" INTEGRAL	-.46714	-.49902
CLAUSERS "G" INTEGRAL	5.41368	5.46998
DISPLACEMENT THICKNESS - CONSTANT DENSITY	.02297	.02158
MOMENTUM THICKNESS - CONSTANT DENSITY	.01000	.01135
SHAPE FACTOR 12 - CONSTANT DENSITY	2.29770	1.90134

LOCATION -X- 12.28000

Z = +6 INCHES

Table 2.

JOB KL002 TAPE 3166R- FILES 01-21, RUNS 5.01-5.21 03/09/79

RUN NO. F. POINT 2. NO GRID

REDUCED PROFILE DATA

N	INCHES	Y	U	T	U/U'	THETA	U-LIF	UTAU	U(+)	T(+)	Y(+)
1	0.0000	0.0000	0.0000	0.0000	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0072	0.0072	0.0072	0.0072	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0144	0.0144	0.0144	0.0144	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0216	0.0216	0.0216	0.0216	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0288	0.0288	0.0288	0.0288	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0360	0.0360	0.0360	0.0360	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0432	0.0432	0.0432	0.0432	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0504	0.0504	0.0504	0.0504	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
9	0.0576	0.0576	0.0576	0.0576	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
10	0.0648	0.0648	0.0648	0.0648	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
11	0.0720	0.0720	0.0720	0.0720	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
12	0.0792	0.0792	0.0792	0.0792	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
13	0.0864	0.0864	0.0864	0.0864	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
14	0.0936	0.0936	0.0936	0.0936	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
15	0.1008	0.1008	0.1008	0.1008	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
16	0.1080	0.1080	0.1080	0.1080	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
17	0.1152	0.1152	0.1152	0.1152	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
18	0.1224	0.1224	0.1224	0.1224	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
19	0.1296	0.1296	0.1296	0.1296	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
20	0.1368	0.1368	0.1368	0.1368	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
21	0.1440	0.1440	0.1440	0.1440	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
22	0.1512	0.1512	0.1512	0.1512	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
23	0.1584	0.1584	0.1584	0.1584	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
24	0.1656	0.1656	0.1656	0.1656	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
25	0.1728	0.1728	0.1728	0.1728	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
26	0.1700	0.1700	0.1700	0.1700	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
27	0.1772	0.1772	0.1772	0.1772	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
28	0.1844	0.1844	0.1844	0.1844	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
29	0.1916	0.1916	0.1916	0.1916	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
30	0.1988	0.1988	0.1988	0.1988	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
31	0.2060	0.2060	0.2060	0.2060	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
32	0.2132	0.2132	0.2132	0.2132	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
33	0.2204	0.2204	0.2204	0.2204	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
34	0.2276	0.2276	0.2276	0.2276	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
35	0.2348	0.2348	0.2348	0.2348	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
36	0.2420	0.2420	0.2420	0.2420	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
37	0.2492	0.2492	0.2492	0.2492	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
38	0.2564	0.2564	0.2564	0.2564	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
39	0.2636	0.2636	0.2636	0.2636	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
40	0.2708	0.2708	0.2708	0.2708	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
41	0.2780	0.2780	0.2780	0.2780	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
42	0.2852	0.2852	0.2852	0.2852	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
43	0.2924	0.2924	0.2924	0.2924	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
44	0.3000	0.3000	0.3000	0.3000	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Table 2.

JOB KLD02 TAPE 3166R- FILES C1-21, PUNS 5.01-5.21 03/09/79

RUN NO. 5. POINT . 3.

NO GRID

BOUNDARY LAYER PROPERTIES

LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO $y+=35$
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FREE STREAM VELOCITY =	99.148	99.148
FREE STREAM TEMPERATURE =	67.830	
WALL TEMPERATURE =	101.715	
WALL HEAT FLUX =	.04653	
FREE STREAM DENSITY =	.07671	
FREE STREAM KINEMATIC VISCOSITY =	.0001589	
DENSITY OF FLUID AT WALL =	.07259	
KINEMATIC VISCOSITY OF FLUID AT WALL =	.0001773	
WALL/FREE STREAM DENSITY RATIO =	.93965	
LOCATION REYNOLDS NUMBER (REX) =	634545.71	
INPUT VALUE OF VELOCITY DELTA =	.09700	
INPUT VALUE OF TEMPERATURE DELTA =	.09700	
CALCULATED DELTA =		.07975
DELTA 99.5% INPUT =	.00000	
DISPLACEMENT THICKNESS (DELSTAR) =	.02503	.02257
MOMENTUM THICKNESS (THETA) =	.00937	.01049
ENERGY-DISSIPATION THICKNESS =	.01492	.01688
ENTHALPY THICKNESS =	.00056	.00073
SHAPE FACTOR 12 (DELSTAR/THETA) =	2.67107	2.10407
SHAPE FACTOR 12 (ENERGY/THETA) =	1.59226	1.60945
MOMENTUM THICKNESS REYNOLDS NUMBER =	487.39	545.56
DISPLACEMENT THICKNESS REYNOLDS NUMBER =	1301.84	1147.89
SKIN FRICTION COEFFICIENT =	.002893	
FRICTION VELOCITY =	3.89020	
LAW OF THE WALL CONSTANT (K) =	.41000	
LAW OF THE WALL CONSTANT (C) =	5.00000	
WAKE STRENGTH =		1.70859
CLAUSERS "DELTA" INTEGRAL =	-.48284	-.54461
CLAUSERS "C" INTEGRAL =	9.65826	6.87522
DISPLACEMENT THICKNESS - CONSTANT DENSITY =	.02171	.02137
MOMENTUM THICKNESS - CONSTANT DENSITY =	.00961	.01078
SHAPE FACTOR 12 - CONSTANT DENSITY =	2.26000	1.98145

LOCATION -X- 12.20000

Z = -6 INCHES

Table 3.

JOB KLDC2 TAPE 3166R- FILES 01-21, PUNS 5.01-5.21 03/09/79

RUN NO. 5. POINT 3. NO GRID

REDUCED PROFILE DATA

N	INCHES	Y'	U	T	U/UE	THETA	UTAU	U141	T141	Y(+)
1	.0055	.069	11.47	96.07	.120	.161	-22.435	3.052	6.917	10.110
2	.0065	.082	13.22	96.49	.133	.154	-22.067	3.399	7.550	11.938
3	.0075	.094	16.45	96.55	.162	.183	-21.352	4.134	8.984	13.766
4	.0085	.106	19.24	94.53	.194	.212	-20.541	4.946	10.381	15.777
5	.0095	.119	22.23	97.85	.224	.222	-19.771	5.715	11.364	17.422
6	.0115	.142	27.47	92.47	.279	.275	-18.375	7.112	13.465	20.713
7	.0131	.165	31.61	90.87	.319	.220	-17.362	8.124	15.688	24.704
8	.0139	.175	33.53	90.21	.338	.339	-16.967	8.620	16.637	25.466
9	.0150	.200	38.27	88.51	.386	.389	-15.649	9.838	19.087	29.122
10	.0178	.324	42.44	86.02	.432	.437	-14.475	11.011	21.394	32.596
11	.0195	.326	46.01	85.38	.473	.492	-13.429	12.067	23.614	36.252
12	.0211	.267	50.23	84.15	.507	.515	-12.574	12.913	25.348	38.994
13	.0227	.285	52.95	84.11	.534	.549	-11.968	13.618	26.902	41.558
14	.0246	.313	57.22	51.00	.577	.594	-10.778	14.750	29.119	45.576
15	.0266	.328	67.82	60.07	.613	.639	-9.853	15.674	31.300	49.232
16	.0287	.362	64.25	78.86	.646	.674	-8.972	16.515	33.054	52.523
17	.0304	.364	67.58	78.63	.676	.705	-8.248	17.239	34.544	56.631
18	.0309	.463	76.50	74.57	.776	.791	-5.821	19.666	39.263	67.514
19	.0442	.562	84.79	71.06	.855	.878	-3.690	21.796	43.010	80.493
20	.0506	.034	90.73	70.31	.911	.927	-2.266	23.224	45.411	92.376
21	.0571	.710	94.77	69.20	.949	.969	-1.307	24.190	47.017	104.442
22	.0641	.674	96.67	69.20	.970	.980	-0.650	24.837	48.042	117.230
23	.0707	.687	97.64	69.16	.988	.991	-0.711	25.076	48.545	129.305
24	.0771	.967	98.63	67.92	.995	.998	-0.834	25.356	48.782	141.005
25	.0837	1.055	98.94	67.92	.998	.998	-0.834	25.433	48.930	153.071
26	.0938	1.139	99.00	67.84	1.000	1.000	-0.37	25.481	48.990	166.051
27	.0966	1.214	99.13	67.84	1.000	1.000	-0.366	25.481	48.997	177.020
28	.1036	1.209	99.17	67.82	1.000	1.000	-0.366	25.493	49.017	189.451
29	.1109	1.501	99.17	67.82	1.000	1.000	-0.365	25.493	49.014	202.766
30	.1167	1.463	99.11	67.82	1.000	1.000	-0.365	25.492	48.994	213.400
31	.1241	1.656	99.21	67.85	1.001	1.000	-0.117	25.523	48.973	226.928
32	.1306	1.638	99.26	67.86	1.001	1.000	-0.029	25.516	48.956	238.811
33	.1479	1.885	99.13	67.82	1.000	1.000	-0.025	25.482	49.024	270.438
34	.1653	2.073	99.25	67.85	1.000	1.000	-0.018	25.466	48.976	302.248
35	.1829	2.093	99.29	67.85	1.000	1.000	-0.014	25.473	48.929	334.423
36	.2006	2.514	99.39	67.87	1.000	1.000	-0.014	25.473	48.916	366.598
37	.2175	2.727	99.33	67.87	1.000	1.000	-0.31	25.456	48.941	397.677
38	.2357	2.955	98.96	67.87	1.000	1.000	-0.42	25.445	48.920	430.940
39	.2531	3.174	99.57	67.90	1.000	1.000	-0.42	25.466	48.838	462.750
40	.2709	3.397	99.52	67.95	1.000	1.000	-0.24	25.453	48.827	495.300
41	.2875	3.605	99.51	67.93	1.000	1.000	-0.35	25.462	48.865	525.647
42	.3055	3.821	99.50	67.88	1.000	1.000	-0.34	25.462	48.839	558.558
43	.6561	7.569	99.50	67.94	1.000	1.000	-0.38	25.449	48.839	1108.795
44	.6557	22.679	98.99	68.71	1.000	1.000	-0.73	25.413	48.781	301.141
45	3.0055	37.692	99.53	68.15	1.000	1.000	-0.30	25.457	48.540	5494.552

Table 3.

JOB KLDC2 TAPE 3166R- FILES 01-21, RUNS 5.01-5.21 C3/C9/79

RUN NO. 5. POINT 4. NO GRID

BOUNDARY LAYER PROPERTIES

LINEAR INTERPOLATION	STANDARD SUBLAYER FUNCTION FROM TO WALL
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FREE STREAM VELOCITY	99.094	99.094
FREE STREAM TEMPERATURE	68.013	
WALL TEMPERATURE	82.460	
WALL HEAT FLUX	.25137	
FREE STREAM DENSITY	.27659	
FREE STREAM KINEMATIC VISCOSITY	.0001592	
DENSITY OF FLUID AT WALL	.07464	
KINEMATIC VISCOSITY OF FLUID AT WALL	.0001667	
WALL/FREE STREAM DENSITY RATIO	.97335	
LOCATION REYNOLDS NUMBER (REX)	1880639.66	
INPUT VALUE OF VELOCITY DELTA	.52000	
INPUT VALUE OF TEMPERATURE DELTA	.56000	
CALCULATED DELTA		.48318
DELTA .99.5% INPUT	.00000	
DISPLACEMENT THICKNESS (DELSTAR)	.07355	.07358
MOMENTUM THICKNESS (THETA)	.05077	.05097
ENERGY-DISSIPATION THICKNESS	.08966	.08981
ENTHALPY THICKNESS	.02178	.02178
SHAPE FACTOR 12 (DELSTAR/THETA)	1.44885	1.44356
SHAPE FACTOR 32 (ENERGY/THETA)	1.76624	1.76201
MOMENTUM THICKNESS REYNOLDS NUMBER	2637.42	2647.98
DISPLACEMENT THICKNESS REYNOLDS NUMBER	3821.20	3822.51
SKIN FRICTION COEFFICIENT	.003330	
FRICTION VELOCITY	4.09868	
LAW OF THE WALL CONSTANT (K)	.41000	
LAW OF THE WALL CONSTANT (C)	5.00000	.48255
WAKE STRENGTH		
CLAUSERS "DELTA" INTEGRAL	-1.60637	-1.73577
CLAUSERS "E" INTEGRAL	12.05140	11.94194
DISPLACEMENT THICKNESS - CONSTANT DENSITY	.06911	.07170
MOMENTUM THICKNESS - CONSTANT DENSITY	.05115	.05136
SHAPE FACTOR 12 - CONSTANT DENSITY	1.35095	1.39775

LOCATION -X- 36.20000

Z = CENTERLINE

Table 4.

JOE KLDC2 TAPE 3166R- FILES C1-21, RUNS S-C1-S.21 03/09/79

RUN NO. 5. POINT 4. NO GRID

REDUCED PROFILE DATA

	Y INCHES	Y/ DELTA	U FT/SEC	T DEG.F.	U/UF	THETA	U-UF	U(+)	T(+)	Y(+)
1	.3653	.011	37.68	77.78	.379	.324	-15.014	9.173	6.623	10.918
2	.3563	.013	40.40	77.29	.408	.358	-14.320	9.857	7.394	12.067
3	.3573	.015	44.12	76.03	.445	.383	-13.413	10.764	7.909	15.015
4	.3563	.017	46.36	76.62	.474	.404	-12.720	11.457	8.352	17.064
5	.3598	.020	50.70	76.21	.503	.432	-11.894	12.283	8.930	20.136
6	.0116	.024	52.76	75.62	.532	.460	-11.305	12.676	9.490	23.823
7	.0126	.026	53.91	75.59	.543	.476	-10.947	13.120	9.819	25.872
8	.0146	.030	55.48	75.28	.560	.497	-10.641	13.536	10.269	29.969
9	.0164	.034	56.49	75.13	.570	.508	-10.794	13.783	10.492	33.656
10	.0187	.036	57.68	74.95	.582	.520	-10.110	14.067	10.733	37.548
11	.0206	.041	58.32	74.84	.589	.528	-9.947	14.237	10.895	40.621
12	.0211	.044	59.76	74.74	.595	.534	-9.768	14.399	11.032	43.284
13	.0232	.048	59.76	74.59	.602	.545	-9.612	14.565	11.256	47.585
14	.0252	.052	60.35	74.47	.609	.553	-9.464	14.713	11.422	51.682
15	.0274	.057	61.13	74.35	.617	.561	-9.262	14.915	11.594	56.129
16	.0289	.060	61.45	74.27	.623	.567	-9.184	14.993	11.705	59.261
17	.0356	.088	63.24	73.05	.638	.589	-8.748	15.429	12.176	72.986
18	.0424	.088	64.05	72.65	.655	.610	-8.330	15.647	12.693	86.916
19	.0493	.102	66.43	73.45	.670	.624	-7.969	16.208	12.584	101.750
20	.0553	.115	67.42	73.26	.680	.637	-7.729	16.448	13.155	113.340
21	.0624	.129	68.66	73.06	.693	.651	-7.421	16.750	13.436	127.884
22	.0695	.143	69.74	72.97	.704	.664	-7.163	17.014	13.724	141.814
23	.0752	.156	70.66	72.73	.713	.670	-6.938	17.279	13.841	154.104
24	.0822	.171	71.78	72.56	.724	.679	-6.665	17.512	14.021	166.034
25	.0892	.184	72.49	72.45	.733	.689	-6.445	17.732	14.273	168.273
26	.0956	.198	73.49	72.39	.742	.697	-6.247	17.920	14.473	195.893
27	.1026	.212	74.41	72.20	.751	.710	-6.022	18.155	14.650	210.232
28	.1096	.227	75.29	72.11	.759	.716	-5.818	18.359	14.803	224.571
29	.1153	.239	75.95	72.05	.766	.721	-5.659	18.518	15.070	236.247
30	.1222	.253	76.74	71.92	.774	.730	-5.455	18.712	15.340	246.781
31	.1290	.267	77.50	71.80	.782	.738	-5.269	18.916	15.541	264.311
32	.1464	.283	79.37	71.65	.801	.755	-4.811	19.366	15.595	299.053
33	.1638	.339	81.11	71.28	.819	.774	-4.388	19.789	15.975	335.596
34	.1910	.375	82.16	71.05	.835	.789	-3.969	20.188	16.302	370.702
35	.1990	.412	84.54	70.90	.853	.807	-3.552	20.625	16.669	407.702
36	.2160	.447	85.90	70.74	.866	.823	-3.229	20.948	17.000	442.525
37	.2342	.485	87.09	70.37	.883	.837	-2.831	21.346	17.281	479.807
38	.2510	.520	88.93	70.11	.878	.855	-2.504	21.673	17.657	514.221
39	.2694	.558	90.75	69.91	.899	.869	-2.199	21.978	17.944	551.912
40	.2800	.595	91.26	69.70	.921	.883	-1.911	22.266	18.233	585.916
41	.3042	.632	92.46	69.54	.933	.895	-1.620	22.557	18.483	623.198
42	.3394	.702	94.67	69.13	.955	.923	-1.079	23.008	19.055	695.303
43	.3740	.774	96.42	68.79	.973	.946	-0.653	23.524	19.539	766.179
44	.4295	.847	97.69	68.48	.986	.968	-0.343	23.874	19.989	837.875
45	.4445	.920	98.42	68.27	.993	.982	-0.165	24.012	20.286	910.594
46	.4722	.992	98.80	68.08	.998	.992	-0.059	24.118	20.475	981.675
47	.5144	1.048	99.55	68.04	1.000	.993	-0.010	24.167	20.614	1033.780
48	.5493	1.137	99.79	67.99	1.000	1.002	-0.001	24.177	20.684	1125.271
49	.5646	1.212	99.99	68.71	1.000	1.003	-0.001	24.176	20.649	1197.581
50	.6192	1.282	99.16	68.52	1.000	1.009	-0.001	24.178	20.639	1268.457
51	.6548	1.354	99.36	68.33	1.000	1.001	-0.010	24.167	20.662	1340.567
52	.6892	1.426	99.56	68.01	1.000	1.001	-0.014	24.163	20.661	1411.844
53	.7243	1.499	99.76	68.01	1.000	1.000	-0.010	24.167	20.655	1483.749
54	.7594	1.572	99.93	68.02	1.000	1.000	-0.016	24.161	20.637	1555.649
55	.7944	1.644	99.98	67.98	1.000	1.002	-0.014	24.163	20.701	1627.345
56	.8294	1.717	98.96	68.04	1.000	1.002	-0.036	24.141	20.661	1699.740
57	.8644	1.780	98.96	68.04	1.000	1.000	-0.033	24.144	20.627	1770.736
58	.9394	1.864	98.98	68.04	1.000	1.000	-0.036	24.142	20.635	1842.431
59	.9341	1.933	98.95	68.01	1.000	1.000	-0.031	24.146	20.659	1913.512
60	.9690	2.006	98.97	68.03	1.000	1.000	-0.031	24.146	20.629	1985.003
61	1.0041	2.078	98.97	68.01	1.000	1.000	-0.031	24.146	20.655	2056.903
62	1.2893	2.666	98.95	68.07	1.000	1.000	-0.047	24.146	20.630	2226.769
63	1.5732	3.266	98.95	68.03	1.000	1.000	-0.047	24.131	20.660	2313.033
64	1.8614	3.952	98.01	68.01	1.000	1.001	-0.046	24.122	20.628	4397.659
65	2.1468	4.443	98.97	68.03	1.000	1.000	-0.055	24.122	20.628	4397.659
66	2.4322	5.034	98.97	68.01	1.000	1.000	-0.042	24.135	20.579	4982.784
67	2.7180	5.625	98.92	68.11	1.000	1.000	-0.042	24.135	20.508	5567.729
68	3.0040	6.217	98.79	68.10	1.000	1.000	-0.075	24.102	20.533	6153.584

Table 4.

JOB KLD02 TAPE 3166R- FILES 01-21, RUNS 5.01-5.21 03/00/79

RUN NO. 5. POTNT 5. NO GRID

BOUNDARY LAYER PROPERTIES

LINEAR INTERPOLATION	SUBLAYERED FUNCTION FROM WALL TO $y^+=35$	STANDARD
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FREE STREAM VELOCITY	=	98.420	98.420
FREE STREAM TEMPERATURE	=	68.158	
WALL TEMPERATURE	=	82.650	
WALL HEAT FLUX	=	.CE116	
FREE STREAM DENSITY	=	.C7667	
FREE STREAM KINEMATIC VISCOSITY	=	.C001590	
DENSITY OF FLUID AT WALL	=	.07463	
KINEMATIC VISCOSITY OF FLUID AT WALL	=	.C001668	
WALL/FREE STREAM DENSITY RATIO	=	.97337	
LOCATION REYNOLDS NUMBER (REX)	=	1866.947.52	
INPUT VALUE OF VELOCITY DELTA	=	.52000	
INPUT VALUE OF TEMPERATURE DELTA	=	.56000	
CALCULATED DELTA	=		.49236
DISPLACEMENT THICKNESS (DELSTAR)	=	.03000	
MOMENTUM THICKNESS (THETA)	=	.07511	.07530
ENERGY-DISSIPATION THICKNESS	=	.05208	.05217
ENTHALPY THICKNESS	=	.09190	.09191
SHAPE FACTOR 12 (DELSTAR/THETA)	=	.00181	.00181
SHAPE FACTOR 12 (ENEPGY/THETA)	=	1.44222	1.44329
MOMENTUM THICKNESS REYNOLDS NUMBER	=	1.76467	1.76165
DISPLACEMENT THICKNESS REYNOLDS NUMBER	=	2685.65	2690.71
SKIN FRICTION COEFFICIENT	=	3873.60	3883.48
FRICITION VELOCITY	=	.003309	
LAW OF THE WALL CONSTANT (K)	=	4.05792	
LAW OF THE WALL CONSTANT (C)	=	.41000	
WAKE STRENGTH	=	5.00000	
CLAUSER'S "DELTA" INTEGRAL	=		.49413
CLAUSER'S "F" INTEGRAL	=	-1.67262	-1.78252
DISPLACEMENT THICKNESS - CONSTANT DENSITY	=	12.25304	12.30926
MOMENTUM THICKNESS - CONSTANT DENSITY	=	.07114	.07349
SHAPE FACTOR 12 - CONSTANT DENSITY	=	.05247	.05257
		1.35571	1.39805
LOCATION -X-	=	36.20000	
Z = +6 INCHES			

Table 5.

JOE KLDC2 TAPE 3166R- FILES C1-21, RUNS 5.01-5.21 03/09/79

RUN NO. 5. POINT 5. NO GRID

REDUCED PROFILE DATA

N	INCHES	Y/	U	T	U/U'	THETA	UTAU	U(+)	T(+)	V(+)
1	004478	0.009	35.68	78.57	.363	.279	-15.460	8.793	5.719	8.778
2	005555	0.011	37.02	77.93	.376	.223	-15.130	9.124	6.635	11.210
3	005666	0.013	40.96	77.43	.415	.388	-14.165	10.369	7.742	13.237
4	005666	0.015	44.51	77.73	.452	.386	-13.266	10.968	7.918	15.264
5	005666	0.018	47.56	76.73	.481	.407	-12.583	11.671	8.346	17.494
6	005666	0.021	50.54	76.17	.514	.445	-11.790	12.464	9.139	20.738
7	005666	0.024	52.34	75.56	.547	.467	-11.357	12.897	9.576	23.081
8	005666	0.026	54.01	75.75	.558	.474	-11.119	13.135	9.724	25.603
9	005666	0.034	56.71	75.43	.569	.496	-10.723	13.530	10.183	30.265
10	005666	0.034	58.78	75.22	.573	.511	-10.452	13.602	10.487	33.500
11	005666	0.034	59.82	75.03	.586	.527	-10.237	14.017	10.802	37.366
12	005666	0.043	59.72	74.79	.587	.541	-9.989	14.265	11.001	41.000
13	005666	0.043	59.26	74.63	.600	.552	-9.700	14.375	11.100	43.220
14	005666	0.043	59.69	74.47	.607	.563	-9.543	14.554	11.326	47.699
15	005666	0.050	60.23	74.36	.612	.570	-9.412	14.711	11.556	51.754
16	005666	0.050	60.77	74.21	.617	.574	-9.276	14.841	11.772	55.807
17	005666	0.057	62.47	74.07	.635	.501	-8.866	15.394	12.114	59.051
18	005666	0.057	64.18	73.76	.652	.611	-8.438	15.616	12.534	66.620
19	005666	0.057	66.62	73.57	.667	.627	-8.082	16.172	12.858	70.010
20	005666	0.063	66.30	73.29	.679	.638	-7.706	16.468	13.079	12.770
21	005666	0.063	69.00	73.16	.692	.644	-7.476	16.778	13.409	12.566
22	005666	0.063	70.00	72.90	.703	.664	-7.264	17.047	13.621	14.153
23	005666	0.063	71.04	72.74	.712	.672	-6.933	17.271	13.777	15.314
24	005666	0.063	71.54	72.59	.722	.683	-6.747	17.507	14.026	16.730
25	005666	0.063	72.56	72.40	.722	.692	-6.489	17.765	14.201	18.896
26	005666	0.063	73.67	72.24	.734	.702	-6.323	17.931	14.308	19.059
27	005666	0.063	74.40	72.31	.746	.713	-6.105	18.154	14.621	20.438
28	005666	0.063	75.25	72.01	.757	.724	-5.905	18.349	14.764	22.183
29	005666	0.063	75.03	72.00	.765	.734	-5.705	18.553	14.857	23.791
30	005666	0.063	76.73	71.86	.771	.743	-5.504	18.711	15.063	24.876
31	005666	0.063	77.73	71.70	.780	.753	-5.304	18.909	15.253	26.237
32	005666	0.063	78.73	71.56	.781	.763	-5.106	19.351	15.589	29.744
33	005666	0.063	79.62	71.37	.798	.778	-4.906	19.766	15.959	33.2918
34	005666	0.063	80.26	71.15	.816	.832	-4.705	20.179	16.271	36.582
35	005666	0.063	81.00	70.90	.832	.848	-3.667	20.561	16.616	40.4274
36	005666	0.063	81.73	70.70	.862	.854	-3.321	20.972	16.901	43.9344
37	005666	0.063	84.94	70.50	.875	.875	-2.958	21.296	17.217	47.5629
38	005666	0.063	84.94	70.30	.875	.883	-2.643	21.611	17.405	50.5483
39	005666	0.063	87.55	69.91	.891	.885	-2.340	21.945	17.750	54.6782
40	005666	0.063	89.55	69.73	.905	.880	-2.036	22.214	18.044	58.1341
41	005666	0.063	90.14	69.50	.916	.902	-1.731	22.523	18.296	61.6921
42	005666	0.063	91.40	69.20	.929	.914	-1.422	23.032	18.754	66.7872
43	005666	0.063	93.45	69.00	.938	.938	-1.122	23.462	19.250	75.9224
44	005666	0.063	93.45	68.72	.943	.950	-0.823	23.840	19.617	82.9772
45	005666	0.063	95.29	68.55	.963	.976	-0.523	24.013	20.000	92.5777
46	005666	0.063	97.71	68.41	.983	.988	-0.224	24.199	20.474	97.2177
47	005666	0.063	98.73	68.23	.989	.996	-0.020	24.444	20.848	104.3228
48	005666	0.063	99.38	68.11	.998	.998	-0.010	24.655	21.113	107.572
49	005666	0.063	100.46	68.01	1.000	1.000	-0.011	24.869	21.483	111.8522
50	005666	0.063	101.16	68.01	1.000	1.000	-0.005	25.020	21.855	115.8778
51	005666	0.063	101.87	68.04	1.000	1.000	-0.009	25.232	22.266	120.920
52	005666	0.063	102.58	68.15	1.000	1.000	-0.014	25.436	22.676	126.924
53	005666	0.063	103.29	68.25	1.000	1.000	-0.011	25.637	23.083	132.978
54	005666	0.063	104.01	68.41	1.000	1.000	-0.039	25.933	23.486	146.6728
55	005666	0.063	104.72	68.58	1.000	1.000	-0.039	26.336	23.878	151.9678
56	005666	0.063	105.43	68.61	1.000	1.000	-0.034	26.738	24.265	161.0426
57	005666	0.063	106.14	68.48	1.000	1.000	-0.031	27.139	24.656	168.1376
58	005666	0.063	106.85	68.38	1.000	1.000	-0.026	27.543	25.050	175.2934
59	005666	0.063	107.56	68.40	1.000	1.000	-0.022	27.946	25.457	182.5682
60	005666	0.063	108.27	68.37	1.000	1.000	-0.012	28.348	25.857	189.4834
61	005666	0.063	109.94	68.32	1.000	1.000	-0.003	28.742	26.228	196.5176
62	005666	0.063	110.40	68.29	1.000	1.000	-0.033	29.121	26.609	203.3229
63	005666	0.063	110.49	68.28	1.000	1.000	-0.034	29.520	26.973	205.573
64	005666	0.063	110.20	68.25	1.000	1.000	-0.037	29.913	27.356	211.3660
65	005666	0.063	110.71	68.27	1.000	1.000	-0.031	30.317	27.733	217.9300
66	005666	0.063	114.31	68.36	1.000	1.000	-0.039	30.715	28.129	220.573
67	005666	0.063	114.91	68.32	1.000	1.000	-0.024	31.127	28.519	220.519
68	005666	0.063	115.52	68.35	1.000	1.000	-0.015	31.527	28.913	220.615
69	005666	0.063	116.04	68.38	1.000	1.000	-0.056	31.918	29.305	220.621

Table 5.

JOB KLD02 TAPE 3166R- FILES C1-21, RUNS 5.01-5.21 03/09/79

RUN NO. 5. POINT 7. NO GRID

BOUNDARY LAYER PROPERTIES

LINEAR	STANDARD
INTERPOLATION	SUBLAYER
TO WALL	FUNCTION FROM
	WALL TO $\gamma^+ = 35$

FREE STREAM VELOCITY	=	98.761	98.761
FREE STREAM TEMPERATURE	=	68.930	
WALL TEMPERATURE	=	83.510	
WALL HEAT FLUX	=	.05148	
FREE STREAM DENSITY	=	.07661	
FREE STREAM KINEMATIC VISCOSITY	=	.0001592	
DENSITY OF FLUID AT WALL	=	.07450	
KINEMATIC VISCOSITY OF FLUID AT WALL	=	.0001673	
WALL/FREE STREAM DENSITY RATIO	=	.97242	
LOCATION REYNOLDS NUMBER (REX)	=	2053001.96	
INPUT VALUE OF VELOCITY DELTA	=	.59000	
INPUT VALUE OF TEMPERATURE DELTA	=	.59000	
CALCULATED DELTA	=		.54325
DELTA 99.5% INPUT	=	.00000	
DISPLACEMENT THICKNESS (DELSTAR)	=	.08240	.08254
MOMENTUM THICKNESS (θ)	=	.05725	.05743
ENERGY-DISSIPATION THICKNESS	=	.10114	.10124
ENTHALPY THICKNESS	=	.00202	.00202
SHAPE FACTOR 1? (DELSTAR/ θ)	=	1.43940	1.43740
SHAPE FACTOR 32 (ENERGY/ θ)	=	1.76681	1.76297
MOMENTUM THICKNESS REYNOLDS NUMBER	=	2958.93	2968.18
DISPLACEMENT THICKNESS REYNOLDS NUMBER	=	4259.09	4266.46
SKIN FRICTION COEFFICIENT	=	.003237	
FRICITION VELOCITY	=	4.02944	
LAW OF THE WALL CONSTANT (K)	=	.41000	
LAW OF THE WALL CONSTANT (C)	=	5.00000	.50245
WAKE STRENGTH	=		
CLAUSER'S "DELTA" INTEGRAL	=	-1.83953	-1.07363
CLAUSER'S "C" INTEGRAL	=	13.63422	13.60837
DISPLACEMENT THICKNESS - CONSTANT DENSITY	=	.07772	.08052
MOMENTUM THICKNESS - CONSTANT DENSITY	=	.05769	.05787
SHAPE FACTOR 12 - CONSTANT DENSITY	=	1.34724	1.39143

LOCATION -X- 40.30000

Z = CENTERLINE

Table 6.

JOB KLD02 TAPE 3166R- FILES 01-21, RUNS 5.01-5.21 03/09/79

RUN NO. 5. POINT 7. NO GRID

REDUCED PROFILE DATA

N	Y INCHES	Y/ DELTA	U FT/SEC	T DEG.F	U/U _F	THETA	U-UE	U(+1)	T(+1)	V(+1)
1	•C0053	•J10	38.24	76.90	.387	.308	-15.021	9.489	6.456	10.457
2	•E0055	•J12	40.60	78.27	.411	.350	-14.433	10.077	7.338	13.105
3	•D0065	•J14	43.90	77.85	.445	.378	-13.615	10.895	7.923	15.112
4	•D0095	•J16	46.89	77.51	.475	.401	-12.674	11.676	8.801	17.119
5	•D1111	•J20	48.97	77.22	.496	.420	-12.357	12.153	8.830	19.126
6	•C1123	•J23	51.64	76.81	.523	.447	-11.695	12.815	9.371	22.337
7	•C1132	•J25	52.77	76.53	.534	.466	-11.412	13.098	9.771	24.746
8	•C1156	•J29	53.01	76.31	.546	.481	-11.130	13.379	10.082	26.753
9	•C1175	•J32	56.57	76.77	.561	.501	-10.761	13.749	10.486	31.168
10	•C1197	•J34	57.61	76.60	.573	.517	-10.472	14.038	10.831	35.182
11	•C1211	•J39	58.24	75.52	.583	.528	-10.212	14.298	11.069	39.587
12	•C1247	•J41	58.66	75.36	.590	.533	-10.057	14.453	11.184	42.407
13	•C1247	•J46	59.70	75.13	.594	.544	-9.952	14.557	11.399	44.815
14	•C1267	•J49	60.31	75.03	.601	.567	-9.774	14.775	11.731	49.632
15	•C1287	•J53	60.79	74.95	.615	.568	-9.595	14.915	11.909	53.646
16	•C1302	•J56	61.21	74.85	.620	.573	-9.425	15.085	12.020	57.660
17	•C1322	•J58	62.70	74.57	.635	.578	-9.318	15.162	12.119	60.672
18	•C1345	•J61	64.22	74.34	.650	.597	-8.935	15.575	12.558	73.916
19	•C1358	•J64	65.66	74.12	.665	.612	-8.572	15.938	12.828	77.965
20	•C1366	•J66	66.65	73.97	.675	.627	-8.214	16.296	13.136	102.014
21	•C1333	•J117	67.65	73.78	.684	.637	-7.966	16.542	13.350	112.654
22	•C1357	•J141	68.43	73.59	.695	.649	-7.734	16.776	13.681	127.101
23	•C1358	•J154	70.48	73.37	.703	.662	-7.465	17.045	13.885	141.952
24	•C1397	•J167	71.39	73.23	.714	.668	-7.280	17.230	13.997	153.933
25	•C1467	•J177	71.99	73.11	.723	.677	-7.019	17.401	14.196	168.292
26	•C1474	•J190	72.89	72.98	.729	.686	-6.794	17.716	14.397	182.331
27	•C1474	•J203	73.53	72.87	.738	.694	-6.643	17.867	14.568	193.580
28	•C1473	•J214	74.13	72.76	.745	.703	-6.421	18.089	14.732	207.580
29	•C1473	•J226	75.00	72.61	.751	.710	-6.262	18.248	14.886	221.428
30	•C1473	•J241	75.66	72.51	.759	.717	-6.112	18.398	15.039	233.470
31	•C1473	•J271	77.25	72.29	.766	.727	-5.896	18.614	15.248	248.321
32	•C1473	•J271	77.57	72.05	.773	.735	-5.729	18.761	15.400	262.571
33	•C1473	•J304	79.07	72.05	.783	.749	-5.315	19.195	15.720	295.686
34	•C1473	•J336	80.60	71.83	.801	.755	-4.887	19.623	16.003	331.409
35	•C1473	•J369	82.06	71.60	.816	.760	-4.507	20.003	16.344	366.130
36	•C1473	•J401	83.55	71.37	.831	.765	-4.144	20.366	16.671	402.857
37	•C1473	•J423	84.02	71.18	.846	.810	-3.773	20.737	16.983	437.376
38	•C1473	•J465	86.14	72.07	.860	.823	-3.435	21.075	17.253	472.298
39	•C1473	•J499	87.51	70.81	.872	.837	-3.132	21.378	17.552	507.420
40	•C1473	•J530	88.68	70.63	.886	.848	-2.791	21.719	17.779	543.746
41	•C1473	•J563	90.01	70.39	.898	.860	-2.502	22.028	18.030	577.463
42	•C1473	•J627	92.10	70.22	.911	.876	-2.172	22.338	18.366	613.990
43	•C1473	•J691	94.06	69.71	.933	.901	-1.654	22.856	18.884	663.438
44	•C1473	•J756	95.52	69.40	.952	.911	-1.168	23.382	19.319	753.875
45	•C1473	•J820	96.97	69.13	.968	.942	-7.665	23.733	19.741	824.721
46	•C1473	•J885	97.84	68.92	.982	.960	-4.466	24.064	20.123	894.161
47	•C1473	•J949	98.38	68.75	.991	.974	-2.228	24.282	20.417	964.606
48	•C1473	•J1013	98.59	68.65	.996	.985	-0.96	24.414	20.660	1034.247
49	•C1473	•J1077	98.72	68.54	.998	.996	-0.043	24.467	20.871	1104.892
50	•C1473	•J142	98.77	68.54	1.000	1.000	-0.011	24.499	20.956	1174.735
51	•C1473	•J206	98.79	68.52	1.000	1.001	-0.006	24.518	20.983	1315.222
52	•C1473	•J271	98.72	68.54	1.000	1.000	-0.001	24.522	20.983	1386.268
53	•C1473	•J336	98.73	68.53	1.000	1.000	-0.001	24.500	20.958	1456.111
54	•C1473	•J400	98.75	68.58	1.000	1.000	-0.001	24.506	20.937	1526.153
55	•C1473	•J464	98.68	68.61	1.000	1.000	-0.001	24.491	20.858	1596.196
56	•C1473	•J530	98.72	68.61	1.000	1.000	-0.001	24.499	20.856	1667.684
57	•C1473	•J593	98.73	68.61	1.000	1.000	-0.001	24.501	20.844	1736.684
58	•C1473	•J657	98.64	68.61	1.000	1.000	-0.001	24.479	20.833	1877.572
59	•C1473	•J722	98.64	68.62	1.000	1.000	-0.001	24.463	20.762	1948.610
60	•C1473	•J787	98.65	68.67	1.000	1.000	-0.001	24.465	20.818	2590.445
61	•C1473	•J851	98.58	68.65	1.000	1.000	-0.001	24.463	20.717	3164.234
62	•C1473	•J902	98.57	68.71	1.000	1.000	-0.001	24.457	20.703	3738.226
63	•C1473	•J929	98.55	68.71	1.000	1.000	-0.001	24.454	20.726	4311.414
64	•C1473	•J954	98.54	68.72	1.000	1.000	-0.001	24.478	20.726	4884.001
65	•C1473	•J964	98.63	68.70	1.000	1.000	-0.001	24.476	20.710	5458.392
66	•C1473	•J9709	98.63	68.70	1.000	1.000	-0.001	24.457	20.710	6031.982
67	•C1473	•J9758	98.61	68.63	1.000	1.000	-0.001	24.471	20.818	2590.445
68	•C1473	•J9851	98.57	68.71	1.000	1.000	-0.001	24.463	20.717	3164.234
69	•C1473	•J9988	98.55	68.71	1.000	1.000	-0.001	24.457	20.726	4884.001

Table 6.

JOE KLD02 TAPE 3166R- FILES 01-21, RUNS 5.01-5.21 03/29/79

RUN NO. E. POTNT S.

NO GRID

BOUNDARY LAYER PROPERTIES

STANDARD
LINEAR
INTERPOLATION
TO WALL

SUPERLAYER
FUNCTION FROM
WALL TO $Y^+ = 35$

FREE STREAM VELOCITY	=	98.660	98.660
FREE STREAM TEMPERATURE	=	68.638	
WALL TEMPERATURE	=	83.642	
WALL HEAT FLUX	=	.000097	
FREE STREAM DENSITY	=	.07660	
FREE STREAM KINEMATIC VISCOSITY	=	.0001593	
DENSITY OF FLUID AT WALL	=	.07448	
KINEMATIC VISCOSITY OF FLUID AT WALL	=	.0001674	
WALL/FREE STREAM DENSITY RATIO	=	.97239	
LOCATION REYNOLDS NUMBER (REX)	=	2080113.22	
INPUT VALUE OF VELOCITY DELTA	=	.59000	
INPUT VALUE OF TEMPERATURE DELTA	=	.63000	
CALCULATED DELTA	=		.55111
DELTA 99.5% INPUT	=	.00000	
DISPLACEMENT THICKNESS (DELSTAR)	=	.08371	.08399
MOMENTUM THICKNESS (THETA)	=	.05843	.05851
ENERGY-DISSIPATION THICKNESS	=	.10321	.10317
ENTHALPY THICKNESS	=	.00201	.00201
SHAPE FACTOR 12 (DELSTAR/THETA)	=	1.43257	1.43556
SHAPE FACTOR 32 (ENERGY/THETA)	=	1.76522	1.76333
MOMENTUM THICKNESS REYNOLDS NUMBER	=	3016.09	3019.99
DISPLACEMENT THICKNESS REYNOLDS NUMBER	=	4320.77	4335.37
SKIN FRICTION COEFFICIENT	=	.003219	
FRICITION VFLOCITY	=	4.0138E	
LAW OF THE WALL CONSTANT (K)	=	.41000	
LAW OF THE WALL CONSTANT (C)	=	5.00000	
WAKE STRENGTH	=		.51173
CLAUSERS "DELTA" INTEGRAL	=	-1.90178	-2.01524
CLAUSERS "G" INTEGRAL	=	13.79419	13.91979
DISPLACEMENT THICKNESS - CONSTANT DENSITY	=	.07954	.08190
MOMENTUM THICKNESS - CONSTANT DENSITY	=	.05887	.05695
SHAPE FACTOR 12 - CONSTANT DENSITY	=	1.35106	1.39085

LOCATION -X- 40.30000

Z = +6 INCHES

Table 7.

JCF KLD02 TAPE 3166P- FILES 01-21, RUNS 5.01-5.21 03/09/79

RUN NO. S. POINT B. NO GRID

REFLECTED PROFILE DATA

N	Y INCHES	Y'	U	T	U/U'	THFTA	UTAU	U(+)	T(+)	V(+)
1	247	36.45	79.53	.360	2.54	-15.499	9.081	5.362	8.653	
2	254	36.77	79.52	.373	3.56	-15.418	9.162	6.499	10.851	
3	264	40.12	78.42	.407	3.48	-14.565	9.905	7.350	12.849	
4	275	43.73	77.89	.443	3.24	-13.684	10.806	8.632	15.044	
5	284	46.21	77.51	.469	4.09	-13.542	11.572	9.459	20.493	
6	291	50.56	76.92	.507	4.49	-12.156	12.926	9.860	22.891	
7	291	51.03	76.64	.525	4.67	-11.674	13.093	10.177	24.640	
8	294	52.51	76.01	.532	4.82	-11.457	13.561	10.675	28.836	
9	294	52.79	76.56	.551	5.05	-11.028	13.855	11.045	33.333	
10	295	55.61	75.79	.564	5.27	-10.725	14.154	11.325	37.229	
11	295	56.81	76.59	.576	5.56	-10.426	14.306	11.487	40.227	
12	297	57.43	75.48	.582	5.84	-10.271	14.464	11.689	42.825	
13	297	58.06	75.34	.588	5.94	-10.116	14.625	12.011	47.221	
14	298	58.62	75.11	.594	6.09	-9.975	14.754	12.161	50.210	
15	298	59.10	75.01	.599	6.76	-9.856	14.927	12.286	55.215	
16	297	59.51	74.21	.613	6.92	-9.653	15.156	12.364	58.212	
17	291	60.43	74.06	.613	6.95	-9.524	15.395	12.456	59.570	
18	295	62.06	74.49	.629	6.10	-9.118	15.462	12.887	71.601	
19	295	62.73	74.32	.646	6.21	-8.400	15.876	13.119	85.790	
20	290	64.04	74.08	.656	6.37	-8.400	16.160	13.462	98.570	
21	290	64.55	73.95	.669	6.73	-8.125	16.455	13.783	111.369	
22	291	65.25	73.74	.681	6.80	-7.835	16.784	14.931	125.357	
23	291	66.13	73.56	.691	6.72	-7.613	16.974	14.105	176.547	
24	294	66.14	73.44	.701	6.80	-7.342	17.238	14.362	150.737	
25	294	67.73	74.32	.710	6.89	-7.138	17.442	14.557	164.725	
26	294	68.40	74.08	.719	6.97	-6.917	17.663	14.724	178.514	
27	295	70.91	73.18	.727	7.00	-6.722	17.857	14.781	190.904	
28	295	71.68	73.14	.734	7.12	-6.529	18.051	15.041	204.693	
29	295	72.45	72.94	.743	7.20	-6.315	18.265	15.197	218.481	
30	295	73.31	72.77	.750	7.24	-6.155	18.425	15.299	230.971	
31	295	73.65	72.77	.756	7.22	-5.954	18.625	15.456	244.462	
32	295	74.70	72.66	.764	7.39	-5.797	18.783	15.612	258.648	
33	295	75.39	72.55	.762	7.54	-5.358	19.222	15.926	292.621	
34	295	77.16	72.33	.767	7.68	-4.990	19.590	16.215	327.992	
35	296	78.63	72.12	.771	7.84	-4.566	20.013	16.555	362.964	
36	296	80.32	71.93	.783	7.99	-4.190	20.389	16.876	398.334	
37	295	81.84	71.65	.830	8.12	-3.843	20.737	17.151	433.106	
38	295	83.23	71.46	.844	8.27	-3.536	21.044	17.469	468.677	
39	295	84.47	71.23	.856	8.40	-3.222	21.356	17.731	502.449	
40	295	85.73	71.04	.869	8.49	-2.916	21.668	17.938	538.619	
41	295	86.93	70.90	.881	8.61	-2.607	21.903	18.179	572.592	
42	295	88.26	70.73	.895	8.81	-2.303	22.260	18.482	608.163	
43	295	89.31	70.51	.905	8.75	-1.992	22.708	18.920	676.105	
44	295	91.47	70.21	.927	9.05	-1.303	23.277	19.353	748.248	
45	295	93.43	69.89	.947	9.16	-1.061	23.674	19.747	817.091	
46	295	95.02	69.61	.963	9.35	-0.966	24.043	20.128	867.934	
47	295	96.11	69.34	.976	9.53	-0.537	24.279	20.499	958.076	
48	295	97.45	69.08	.988	9.71	-0.311	24.442	21.754	1028.019	
49	295	98.11	68.90	.994	9.83	-0.138	24.442	21.909	1097.062	
50	295	98.54	68.79	1.000	9.90	-0.030	24.553	21.909	1168.105	
51	295	98.63	68.71	1.000	9.95	-0.027	24.573	21.022	1237.648	
52	295	98.63	68.66	1.000	9.98	-0.028	24.572	21.044	1307.591	
53	295	98.63	68.63	1.000	1.001	-0.022	24.577	21.135	1307.591	
54	295	98.70	68.64	1.000	1.000	-0.010	24.500	21.120	1378.333	
55	295	98.74	68.65	1.001	9.99	-0.019	24.500	21.100	1447.476	
56	295	98.75	68.66	1.001	9.99	-0.016	24.505	21.087	1517.619	
57	295	98.76	68.69	1.000	9.97	-0.007	24.507	21.062	1587.761	
58	295	98.76	68.68	1.000	9.98	-0.018	24.598	21.085	1657.704	
59	295	98.76	68.65	1.000	9.99	-0.020	24.578	21.104	1727.247	
60	295	98.76	68.68	1.000	9.99	-0.021	24.573	21.066	1797.590	
61	295	98.76	68.67	1.000	9.98	-0.029	24.560	21.065	1867.333	
62	295	98.76	68.67	1.000	9.98	-0.011	24.569	21.078	1937.776	
63	295	98.76	68.67	1.000	9.98	-0.009	24.570	21.068	2007.418	
64	295	98.76	68.68	1.000	9.98	-0.027	24.553	21.077	2576.753	
65	295	98.76	68.66	1.000	9.98	-0.021	24.559	21.079	3148.285	
66	295	98.76	68.66	1.000	9.98	-0.039	24.543	21.076	3719.818	
67	295	98.76	68.66	1.000	9.98	-0.037	24.543	21.070	4290.751	
68	295	98.76	68.68	1.000	9.98	-0.025	24.545	21.085	4860.886	
69	295	98.76	68.68	1.000	9.97	-0.045	24.535	21.054	6004.150	

Table 7.

JOE KLDC2 TAPE 3166R- FILES C1-21, PUNS 5.C1-5.21 03/09/79

RUN NO. 5. POINT 11. NO GRID

BOUNDARY LAYER PROPERTIES

LINEAR INTERPOLATION TO WALL	SUBLAYERED FUNCTION FROM WALL TO $\gamma^+ = 35$	STANDARD
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FREE STREAM VELOCITY =	99.059	99.059
FREE STREAM TEMPERATURE =	68.872	
WALL TEMPERATURE =	84.430	
WALL HEAT FLUX =	.05134	
FREE STREAM DENSITY =	.07591	
FREE STREAM KINEMATIC VISCOSITY =	.0001608	
DENSITY OF FLUID AT WALL =	.07374	
KINEMATIC VISCOSITY OF FLUID AT WALL =	.0001693	
WALL/FREE STREAM DENSITY RATIO =	.97141	
LOCATION REYNOLDS NUMBER (REX) =	2270367.69	
INPUT VALUE OF VELOCITY DELTA =	.70000	
INPUT VALUE OF TEMPERATURE DELTA =	.67000	
CALCULATED DELTA =		.61240
DISPLACEMENT THICKNESS (DELSTAR) =	.00000	
MOMENTUM THICKNESS (THETA) =	.09256	.09281
ENERGY-DISSIPATION THICKNESS =	.06485	.06492
ENTHALPY THICKNESS =	.11455	.11456
SHAPE FACTOR 12 (DELSTAR/THETA) =	.00216	.00216
SHAPE FACTOR 32 (ENEPGY/THETA) =	1.42734	1.42946
MOMENTUM THICKNESS REYNOLDS NUMBER =	1.76686	1.76443
DISPLACEMENT THICKNESS REYNOLDS NUMBER =	3329.59	3333.40
SKIN FRICTION COEFFICIENT =	4752.47	4764.96
FRICTION VELOCITY =	.033149	
LAW OF THE WALL CONSTANT (K) =	3.98780	
LAW OF THE WALL CONSTANT (C) =	.41000	
WAKE STRENGTH =	5.00000	.52128
CLAUSERS "DELTA" INTEGRAL =	-2.13805	-2.25171
CLAUSERS "F" INTEGRAL =	15.46966	15.57364
DISPLACEMENT THICKNESS - CONSTANT DENSITY =	.08824	.09065
MOMENTUM THICKNESS - CONSTANT DENSITY =	.06533	.06541
SHAPE FACTOR 12 - CONSTANT DENSITY =	1.35060	1.38587

LOCATION -X- 44.22000

Z = +6 INCHES

Table 8.

JOE KLU02 TAPE 3166R- FILES C1-21, RUNS 5.01-5.21 03/09/79

RUN NO. F. POINT 11. NO GRID

REDUCED PROFILE DATA

N	Y INCHES	Y/ DEG	U FT/SEC	T DEG.F	U/U _E	THFTA	UTAU	U(+)	T(+)	Y(+)
1	0.0000	0.0000	34.59	80.50	349	253	-16.166	8.675	5.403	8.502
2	0.0062	0.0062	34.59	78.50	365	217	-15.781	9.059	6.774	8.528
3	0.0124	0.0124	34.59	76.54	397	347	-14.971	9.087	7.414	8.628
4	0.0186	0.0186	34.59	75.16	455	403	-13.556	11.021	8.618	15.766
5	0.0248	0.0248	47.74	77.56	482	435	-12.868	11.973	9.300	16.122
6	0.0310	0.0310	47.74	77.40	501	452	-12.604	12.437	9.669	20.382
7	0.0372	0.0372	47.74	77.01	522	477	-11.345	12.972	10.204	24.513
8	0.0434	0.0434	51.82	76.51	543	509	-11.030	13.496	10.882	28.528
9	0.0496	0.0496	55.58	76.43	564	521	-10.820	13.811	11.140	32.652
10	0.0558	0.0558	55.58	76.24	584	527	-10.522	14.021	11.274	35.600
11	0.0620	0.0620	55.58	76.04	604	546	-10.223	14.318	11.766	41.487
12	0.0682	0.0682	55.58	75.87	625	564	-10.023	14.557	12.066	46.199
13	0.0744	0.0744	55.58	75.65	645	581	-9.978	14.704	12.291	50.126
14	0.0806	0.0806	55.58	75.43	665	599	-9.914	15.269	12.610	53.071
15	0.0868	0.0868	55.58	75.11	685	618	-9.851	15.700	13.210	56.049
16	0.0930	0.0930	60.89	74.52	705	634	-8.874	16.084	13.556	59.774
17	0.0992	0.0992	62.81	74.52	725	644	-8.853	16.287	13.765	63.321
18	0.1054	0.1054	63.06	74.57	745	655	-8.841	16.600	14.019	66.102
19	0.1116	0.1116	64.25	74.45	765	671	-7.942	16.899	14.345	69.649
20	0.1178	0.1178	64.25	74.23	785	677	-7.953	17.088	14.475	73.590
21	0.1240	0.1240	66.21	73.99	805	685	-7.948	17.342	14.649	77.978
22	0.1292	0.1292	66.21	73.69	825	695	-7.299	17.551	14.867	81.721
23	0.1354	0.1354	66.21	73.39	845	705	-7.102	17.738	15.023	85.631
24	0.1416	0.1416	67.39	73.09	865	721	-6.933	17.911	15.154	89.950
25	0.1478	0.1478	67.39	72.77	885	729	-6.723	18.118	15.301	93.126
26	0.1540	0.1540	68.57	72.45	905	736	-6.558	18.282	15.470	97.711
27	0.1602	0.1602	68.57	72.13	925	743	-6.374	18.467	15.630	101.455
28	0.1664	0.1664	69.75	71.81	945	751	-6.245	18.595	15.772	105.395
29	0.1726	0.1726	69.75	71.50	965	753	-5.922	18.696	16.100	109.577
30	0.1788	0.1788	69.75	71.19	985	763	-5.596	19.485	16.451	113.133
31	0.1850	0.1850	69.75	70.87	1005	772	-5.396	19.778	16.681	117.707
32	0.1912	0.1912	70.74	70.56	1025	780	-5.063	20.103	16.980	121.126
33	0.1973	0.1973	71.42	70.41	1045	794	-4.738	20.460	17.247	125.711
34	0.2035	0.2035	72.20	70.30	1065	806	-4.438	20.822	17.486	129.455
35	0.2097	0.2097	72.20	70.18	1085	818	-4.019	21.103	17.693	133.357
36	0.2159	0.2159	73.54	70.06	1105	828	-3.843	21.303	17.829	137.032
37	0.2221	0.2221	73.54	69.94	1125	838	-3.643	21.506	18.053	141.662
38	0.2283	0.2283	74.16	69.82	1145	850	-3.453	21.696	18.253	145.652
39	0.2345	0.2345	74.16	69.71	1165	861	-3.262	21.896	18.453	149.642
40	0.2407	0.2407	75.56	69.71	1185	873	-3.077	22.096	18.653	153.532
41	0.2469	0.2469	75.56	69.60	1205	884	-2.887	22.296	18.853	157.432
42	0.2531	0.2531	76.24	69.50	1225	896	-2.702	22.496	19.053	161.320
43	0.2593	0.2593	76.24	69.40	1245	908	-2.512	22.696	19.252	165.210
44	0.2655	0.2655	76.24	69.30	1265	920	-2.322	22.896	19.452	169.100
45	0.2717	0.2717	76.24	69.20	1285	932	-2.132	23.096	19.652	173.000
46	0.2779	0.2779	76.24	69.10	1305	944	-1.942	23.296	19.853	176.900
47	0.2841	0.2841	76.24	69.00	1325	956	-1.752	23.496	20.053	180.800
48	0.2903	0.2903	76.24	68.90	1345	968	-1.562	23.696	20.252	184.700
49	0.2965	0.2965	76.24	68.80	1365	980	-1.372	23.896	20.452	188.600
50	0.3027	0.3027	76.24	68.70	1385	992	-1.182	24.096	20.652	192.500
51	0.3089	0.3089	76.24	68.60	1405	1004	-1.002	24.296	20.853	196.400
52	0.3151	0.3151	76.24	68.50	1425	1016	-0.812	24.496	21.053	200.300
53	0.3213	0.3213	76.24	68.40	1445	1028	-0.622	24.696	21.252	204.200
54	0.3275	0.3275	76.24	68.30	1465	1040	-0.432	24.896	21.451	208.100
55	0.3337	0.3337	76.24	68.20	1485	1052	-0.242	25.096	21.650	212.000
56	0.3399	0.3399	76.24	68.10	1505	1064	-0.052	25.296	21.849	215.900
57	0.3461	0.3461	76.24	68.00	1525	1076	-0.862	25.496	22.048	219.800
58	0.3523	0.3523	76.24	67.90	1545	1088	-0.672	25.696	22.247	223.700
59	0.3585	0.3585	76.24	67.80	1565	1100	-0.482	25.896	22.446	227.600
60	0.3647	0.3647	76.24	67.70	1585	1112	-0.292	26.096	22.645	231.500
61	0.3709	0.3709	76.24	67.60	1605	1124	-0.102	26.296	22.844	235.400
62	0.3771	0.3771	76.24	67.50	1625	1136	-0.912	26.496	23.043	239.300
63	0.3833	0.3833	76.24	67.40	1645	1148	-0.722	26.696	23.242	243.200
64	0.3895	0.3895	76.24	67.30	1665	1160	-0.532	26.896	23.441	247.100
65	0.3957	0.3957	76.24	67.20	1685	1172	-0.342	27.096	23.640	251.000
66	0.4019	0.4019	76.24	67.10	1705	1184	-0.152	27.296	23.839	254.900
67	0.4081	0.4081	76.24	67.00	1725	1196	-0.962	27.496	24.038	258.800

Table 8.

JOE KLD02 TAPE 3166R- FILES C1-21, RUNS 5.01-5.21 03/29/79

RUN NO. 5. POINT 13. NO GRID

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SURFACE FUNCTION FROM WALL TO $y^+=35$
FREE STREAM VELOCITY	99.444	99.444
FREE STREAM TEMPERATURE	68.745	
WALL TEMPERATURE	84.123	
WALL HEAT FLUX	.05151	
FREE STREAM DENSITY	.07593	
FREE STREAM KINEMATIC VISCOSITY	.0001607	
DENSITY OF FLUID AT WALL	.07378	
KINEMATIC VISCOSITY OF FLUID AT WALL	.0001691	
WALL/FREE STREAM DENSITY RATIO	.97173	
LOCATION REYNOLDS NUMBER (REX)	2692679.78	
INPUT VALUE OF VELOCITY DELTA	.77000	
INPUT VALUE OF TEMPERATURE DELTA	.84000	
CALCULATED DELTA		.70870
DELTA 69.5% INPUT	.00000	
DISPLACEMENT THICKNESS (DELSTAR)	.10768	.10762
MOMENTUM THICKNESS (THETA)	.07533	.07549
ENERGY-DISSIPATION THICKNESS	.13310	.13317
ENTHALPY THICKNESS	.00265	.00265
SHAPE FACTOR 12 (DELSTAR/THETA)	1.42940	1.42913
SHAPE FACTOR 32 (ENERGY/THETA)	1.76673	1.76404
MOMENTUM THICKNESS REYNOLDS NUMBER	3864.57	3892.79
DISPLACEMENT THICKNESS REYNOLDS NUMBER	5552.60	5559.41
SKIN FRICTION COEFFICIENT	.003022	
FRICITION VELOCITY	.92160	
LAW OF THE WALL CONSTANT (K)	.41000	
LAW OF THE WALL CONSTANT (C)	5.00000	
WAKE STRENGTH		.56222
CLAUSERS "DELTA" INTEGRAL	-2.52848	-2.66697
CLAUSERS "C" INTEGRAL	18.72867	18.70714
DISPLACEMENT THICKNESS - CONSTANT DENSITY	.10238	.10517
MOMENTUM THICKNESS - CONSTANT DENSITY	.07592	.07608
SHAPE FACTOR 12 - CONSTANT DENSITY	1.34855	1.38236

LOCATION -X- 52.22000

Z = CENTERLINE

Table 9.

JCB KLDC2 TAPE 3166R- FILES 01-21, PUNS 5.01-5.21 03/09/79

PUN NO. 5. POINT 13. NO GRID

REDUCED PROFILE DATA

N	INCHES	V	U	T	U/UF	THETA	UTAU	U(+)	T(+)	V(+)
1	0.005	35	5.52	79.45	.357	.304	-16.361	9.057	6.294	10.362
2	0.009	37	5.51	76.94	.381	.337	-15.694	9.065	6.088	12.234
3	0.011	45	5.32	78.44	.426	.349	-14.566	10.742	7.656	14.054
4	0.012	45	5.14	78.12	.454	.392	-13.849	11.510	8.122	16.487
5	0.014	48	5.48	77.63	.488	.422	-12.996	12.363	8.750	19.777
6	0.016	50	5.19	77.34	.505	.441	-12.561	12.798	9.139	22.765
7	0.018	51	5.10	77.17	.514	.452	-12.329	13.529	9.275	24.219
8	0.020	52	5.22	77.02	.530	.462	-11.913	13.445	9.570	27.097
9	0.023	54	5.01	76.65	.543	.486	-11.566	13.773	10.070	31.562
10	0.025	55	5.05	76.42	.554	.501	-11.321	14.020	10.375	35.828
11	0.026	56	5.04	76.23	.562	.513	-11.118	14.240	10.638	36.100
12	0.029	56	5.11	76.15	.569	.519	-10.922	14.476	10.749	42.796
13	0.033	56	5.04	75.94	.573	.525	-10.838	14.521	11.030	45.092
14	0.036	57	5.55	75.74	.579	.552	-10.684	14.675	11.249	48.957
15	0.039	58	5.29	75.57	.596	.556	-10.544	14.664	11.447	52.823
16	0.041	58	5.85	75.57	.592	.560	-10.423	15.013	11.623	56.495
17	0.042	60	5.14	75.28	.615	.587	-9.618	15.355	11.785	68.865
18	0.044	61	5.73	75.19	.621	.604	-9.201	16.157	12.175	72.201
19	0.046	62	5.30	74.83	.637	.618	-8.962	16.376	12.528	106.940
20	0.048	64	5.22	74.65	.646	.625	-8.856	16.717	12.924	121.036
21	0.050	65	4.99	74.51	.659	.627	-8.741	16.917	13.205	134.386
22	0.052	66	5.24	74.37	.667	.647	-8.641	16.917	13.408	146.175
23	0.057	67	5.21	74.17	.676	.647	-8.283	17.135	13.408	159.125
24	0.060	68	5.11	74.07	.685	.654	-7.991	17.367	13.552	184.264
25	0.062	68	5.93	74.01	.692	.657	-7.807	17.551	13.626	172.654
26	0.065	69	4.95	73.96	.698	.667	-7.648	17.710	13.830	184.464
27	0.068	70	5.74	73.74	.706	.675	-7.446	17.910	14.000	198.247
28	0.070	71	5.17	73.62	.716	.683	-7.210	18.146	14.149	212.276
29	0.072	71	5.52	73.56	.719	.697	-7.121	18.277	14.239	223.293
30	0.073	72	5.13	73.43	.725	.692	-6.966	18.303	14.346	236.436
31	0.075	72	5.00	73.37	.732	.699	-6.794	18.564	14.489	249.965
32	0.077	74	4.93	73.09	.748	.717	-6.378	18.980	14.670	263.209
33	0.079	75	5.88	72.96	.763	.722	-6.109	19.349	15.179	317.419
34	0.082	77	5.13	72.66	.776	.746	-5.690	19.666	15.461	350.663
35	0.084	78	5.56	72.42	.790	.761	-5.325	20.038	15.767	366.419
36	0.087	79	5.44	72.23	.801	.773	-5.050	20.309	16.023	38.889
37	0.090	80	5.21	72.06	.813	.784	-4.749	20.609	16.256	454.066
38	0.093	80	5.14	71.85	.825	.798	-4.446	20.913	16.542	486.923
39	0.096	83	5.14	71.65	.836	.809	-4.159	21.200	16.764	520.040
40	0.099	84	5.10	71.53	.846	.819	-3.900	21.456	16.973	553.410
41	0.102	85	5.29	71.33	.858	.829	-3.600	21.749	17.179	588.587
42	0.104	87	5.71	71.08	.873	.848	-3.391	22.267	17.579	656.620
43	0.106	87	5.29	70.80	.866	.866	-2.631	22.727	17.960	724.961
44	0.108	89	5.13	70.57	.914	.882	-2.183	23.176	18.273	791.141
45	0.110	90	5.05	70.37	.971	.901	-1.746	23.612	18.660	859.368
46	0.112	92	5.00	70.27	.971	.917	-1.362	23.973	18.597	926.435
47	0.114	94	5.01	70.17	.945	.934	-1.033	24.326	19.364	995.242
48	0.116	95	5.76	6.95	.959	.949	-0.734	24.624	19.665	1062.116
49	0.118	96	5.57	6.95	.971	.964	-0.484	24.874	19.972	1133.140
50	0.120	97	5.55	6.90	.981	.976	-0.290	25.068	20.334	1197.796
51	0.122	98	5.41	6.89	.989	.976	-0.093	25.178	20.500	1332.510
52	0.124	98	5.74	6.89	.993	.989	-0.777	25.281	20.506	1332.510
53	0.126	97	5.14	6.80	.997	.989	-0.777	25.281	20.506	1332.510
54	1.022	99	5.39	68.80	1.999	.997	-0.014	25.384	20.657	1400.350
55	1.022	99	5.44	68.81	1.000	.996	-0.006	25.356	20.644	1667.997
56	1.024	99	5.44	68.79	1.000	.997	-0.006	25.358	20.669	1535.644
57	1.024	101	5.43	68.74	1.000	1.001	-0.006	25.355	20.738	16C3.485
58	1.026	99	5.48	68.71	1.000	1.002	-0.007	25.361	20.769	1670.742
59	1.028	99	5.40	68.75	1.000	1.008	-0.009	25.367	20.719	1738.190
60	1.030	99	5.47	68.75	1.000	1.009	-0.007	25.366	20.604	1805.846
61	1.032	99	5.34	68.81	1.000	1.006	-0.028	25.366	20.715	1873.493
62	1.034	99	5.34	68.81	1.000	1.006	-0.028	25.371	20.642	1941.013
63	1.036	99	5.42	68.82	1.000	1.006	-0.028	25.373	20.622	1941.979
64	1.038	99	5.45	68.81	1.000	1.006	-0.028	25.346	20.635	1945.138
65	1.040	99	5.37	68.90	1.000	1.006	-0.026	25.338	20.522	1958.491
66	1.042	99	5.34	68.90	1.000	1.006	-0.026	25.332	20.515	1950.104
67	1.044	99	5.40	68.92	1.000	1.006	-0.024	25.335	20.486	17C1.523
68	3.004	99	5.34	68.91	1.000	1.006	-0.027	25.331	20.500	5806.875

Table 9.

JOE KLD02 TAPE 3166R- FILES 01-21, PUNS 5.01-5.21 03/09/79

RUN NO. 5. POINT 14. NO GRID

BOUNDARY LAYER PROPERTIES

		STANDARD INTERPOLATION	SUBLAYERED FUNCTION FROM TO WALL WALL TO Y+=35
FREE STREAM VELOCITY	=	98.693	98.693
FREE STREAM TEMPERATURE	=	67.661	
WALL TEMPERATURE	=	83.710	
WALL HEAT FLUX	=	.04986	
FREE STREAM DENSITY	=	.07571	
KINEMATIC VISCOSITY OF FLUID AT WALL	=	.0001659	
WALL/FREE STREAM DENSITY RATIO	=	.07347	
LOCATION REYNOLDS NUMBER (REX)	=	.0001697	
INPUT VALUE OF VELOCITY DELTA	=	3270180.37	
INPUT VALUE OF TEMPERATURE DELTA	=	.88000	
CALCULATED DELTA	=	.92000	
DISPLACEMENT THICKNESS (DELSTAR) = INPUT	=	.00000	.81138
MOMENTUM THICKNESS (THETA)	=	.12218	.12228
ENERGY-DISSIPATION THICKNESS	=	.08569	.08609
ENTHALPY THICKNESS	=	.15198	.15199
SHAPE FACTOR 12 (DELSTAR/THETA)	=	.00297	.00298
SHAPE FACTOR 32 (ENERGY/THETA)	=	1.42244	1.42057
MOMENTUM THICKNESS REYNOLDS NUMBER	=	1.76823	1.76573
DISPLACEMENT THICKNESS REYNOLDS NUMBER	=	4389.67	4399.09
SKIN FRICTION COEFFICIENT	=	6244.03	6249.21
FRICITION VELOCITY	=	.002948	
LAW OF THE WALL CONSTANT (K)	=	3.24608	
LAW OF THE WALL CONSTANT (C)	=	.41000	
WAKE STRENGTH	=	5.00000	.56814
CLAUSERS *DELTA* INTEGRAL	=	-2.91444	-3.06146
CLAUSERS *G* INTEGRAL	=	21.52986	21.44969
DISPLACEMENT THICKNESS - CONSTANT DENSITY	=	.11639	.11931
MOMENTUM THICKNESS - CONSTANT DENSITY	=	.08654	.08673
SHAPE FACTOR 12 - CONSTANT DENSITY	=	1.34494	1.37559

LOCATION -X- 60.25000

Z = CENTERLINE

Table 10.

JOE KLD02 TAPE 3166R- FILES 01-21, RUNS 5.01-5.21 03/09/70

RUN NO. 5. POINT 14.

NO GRID

REDUCED PROFILE DATA

N	INCHES	Y/	U	T	U-UF	THFTA	UTAU	U1+3	T1+3	V(+)
1	•0256	•34.16	79.01	•346	•293	-16.779	8.891	6.701	10.633	
2	•0266	•37.81	78.73	•381	•335	-15.661	9.779	7.313	12.522	
3	•0276	•41.56	77.92	•421	•370	-14.649	10.612	8.080	14.411	
4	•0287	•44.21	77.62	•448	•392	-14.166	11.495	8.562	16.488	
5	•0101	•47.17	77.33	•478	•416	-13.397	12.264	9.087	19.132	
6	•0119	•49.87	76.42	•502	•451	-12.773	12.888	9.680	22.632	
7	•0127	•50.25	76.27	•510	•463	-12.560	13.092	10.123	22.443	
8	•0143	•51.45	76.95	•524	•483	-12.339	13.439	10.549	27.065	
9	•0167	•53.13	76.68	•538	•501	-11.846	13.815	10.928	31.597	
10	•0189	•54.26	76.40	•550	•518	-11.554	14.107	11.305	35.753	
11	•0213	•54.67	76.22	•554	•529	-11.454	14.215	11.545	38.208	
12	•0239	•56.23	75.91	•560	•537	-11.030	14.361	11.721	40.285	
13	•0257	•56.15	75.61	•569	•542	-11.062	14.456	11.840	45.196	
14	•0375	•56.80	74.92	•576	•554	-10.891	14.769	12.091	48.596	
15	•0391	•57.16	74.66	•579	•564	-10.794	14.867	12.304	51.095	
16	•0336	•57.81	74.57	•586	•570	-10.630	15.031	12.439	55.017	
17	•0444	•59.32	74.33	•601	•584	-10.236	15.425	12.755	57.104	
18	•0453	•60.65	74.16	•614	•601	-9.966	15.755	13.125	60.703	
19	•0619	•63.04	73.61	•626	•619	-9.542	16.119	13.514	63.735	
20	•0625	•63.85	73.53	•639	•630	-9.269	16.392	13.742	65.633	
21	•0777	•67.16	73.43	•648	•634	-9.042	16.619	13.648	67.721	
22	•0886	•68.55	73.34	•658	•648	-8.773	16.887	14.154	68.508	
23	•0893	•69.89	73.14	•665	•659	-8.592	17.069	14.379	71.508	
24	•0825	•70.32	72.96	•675	•664	-8.348	17.313	14.494	75.872	
25	•0893	•71.05	72.86	•681	•675	-8.185	17.476	14.737	76.715	
26	•0956	•71.21	72.88	•689	•683	-7.985	17.675	14.905	78.425	
27	•1037	•71.68	72.62	•691	•691	-7.777	17.884	15.082	79.590	
28	•1093	•72.53	72.53	•702	•697	-7.659	18.002	15.265	80.488	
29	•1157	•73.24	72.47	•711	•700	-7.558	18.152	15.460	81.419	
30	•1225	•73.34	72.38	•713	•706	-7.372	18.289	15.400	83.419	
31	•1295	•71.02	72.28	•720	•712	-7.195	18.466	15.542	84.648	
32	•1463	•72.37	72.08	•733	•725	-6.944	18.817	15.817	86.369	
33	•1641	•73.78	71.98	•748	•737	-6.478	19.182	16.091	89.988	
34	•1814	•74.75	71.68	•757	•750	-6.226	19.435	16.362	92.662	
35	•1995	•76.78	71.53	•771	•759	-5.884	19.777	16.563	96.847	
36	•2103	•69.74	72.53	•783	•770	-5.576	20.084	16.804	98.576	
37	•2134	•73.34	72.38	•794	•781	-5.294	20.367	17.045	99.572	
38	•2251	•71.02	72.28	•803	•790	-5.054	20.607	17.276	100.554	
39	•2695	•70.26	71.44	•815	•799	-4.747	20.914	17.441	101.539	
40	•2867	•80.44	70.89	•826	•815	-4.468	21.193	17.678	102.968	
41	•3244	•81.51	70.71	•835	•818	-4.238	21.423	17.855	104.469	
42	•3396	•82.39	70.58	•853	•834	-3.768	21.683	18.214	105.845	
43	•3747	•82.60	70.52	•872	•852	-3.283	22.237	18.596	107.742	
44	•4097	•86.57	70.44	•888	•867	-2.881	22.782	18.923	109.845	
45	•4443	•80.21	69.56	•904	•881	-2.465	23.091	19.242	111.193	
46	•4793	•90.69	69.32	•919	•897	-2.060	23.594	19.571	112.507	
47	•5142	•92.16	69.29	•934	•911	-1.698	23.963	19.888	113.400	
48	•5423	•67.77	69.88	•947	•924	-1.359	24.302	20.427	114.905	
49	•5845	•72.00	69.69	•956	•936	-1.071	24.599	20.697	116.466	
50	•6157	•76.4	69.49	•968	•946	-8.802	24.852	20.965	118.192	
51	•6545	•80.7	69.32	•978	•960	-5.564	25.067	21.173	123.918	
52	•6893	•85.0	69.14	•985	•970	-3.378	25.283	21.301	125.918	
53	•7249	•89.3	68.03	•991	•977	-2.241	25.420	21.334	136.9155	
54	•7593	•93.6	68.18	•995	•984	-1.133	25.528	21.473	1474.125	
55	•7943	•97.9	68.41	•997	•989	-0.733	25.616	21.581	1500.226	
56	•8294	•10.65	67.84	•998	•994	-0.433	25.672	21.712	1566.521	
57	•8643	•10.65	67.74	•1.000	•995	-0.002	25.658	21.791	1632.435	
58	•8995	•11.05	67.69	•1.000	•998	-0.002	25.658	21.867	1696.917	
59	•9343	•11.152	67.65	•1.000	•1.000	-0.002	25.658	21.867	1764.642	
60	•9695	•11.195	67.73	•1.000	•1.000	-0.002	25.658	21.867	1831.124	
61	•10346	•11.238	67.68	•1.000	•1.000	-0.002	25.658	21.867	1897.416	
62	•10893	•11.59	67.63	•1.000	•1.000	-0.002	25.658	21.780	2035.121	
63	•118614	•2.294	68.69	•1.000	•997	-0.001	25.658	21.773	2075.847	
64	•2.1471	•2.546	68.56	•1.000	•997	-0.035	25.625	21.765	21.555.223	
65	•2.4323	•2.908	68.62	•1.000	•997	-0.188	25.645	21.757	21.593.972	
66	•2.7169	•3.351	68.63	•1.000	•999	-0.015	25.624	21.719	21.355.165	
67	•3.0047	•3.703	68.47	•1.000	•998	-0.057	25.624	21.673	21.674.94	

Table 10.

JOB KLD02 TAPE 3166R- FILES D1-21, RUNS 5.01-E.21 03/09/79

RUN NO. 5. POINT 16. NO GRID

SECONDARY LAYER PROPERTIES

LINEAR INTERPOLATION TO WALL	STANDARD SURFACE FUNCTION FROM WALL TO $Y^+=35$
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FREE STREAM VELOCITY =	98.710
FREE STREAM TEMPERATURE =	68.031
WALL TEMPERATURE =	85.120
WALL HEAT FLUX =	.0E122
FREE STREAM DENSITY =	.0001511
FREE STREAM KINEMATIC VISCOSITY =	.07328
DENSITY OF FLUID AT WALL =	.0001705
KINEMATIC VISCOSITY OF FLUID AT WALL =	.96863
WALL/FREE STREAM DENSITY RATIO =	307588E-.25
LOCATION REYNOLDS NUMBER (REX) =	.85000
INPUT VALUE OF VELOCITY DELTA =	.85000
INPUT VALUE OF TEMPERATURE DELTA =	.706E4
CALCULATED DELTA =	.00000
DISPLACEMENT THICKNESS (DELSTAR) =	.10755
MOMENTUM THICKNESS (THETA) =	.07486
ENERGY-DISSIPATION THICKNESS =	.13224
ENTHALPY THICKNESS =	.00311
SHAPE FACTOR 12 (DELSTAR/THETA) =	1.43636
SHAPE FACTOR 32 (ENEPGY/THETA) =	1.76599
MOMENTUM THICKNESS REYNOLDS NUMBER =	3822E.71
DISPLACEMENT THICKNESS REYNOLDS NUMBER =	5495E.80
SKIN FRICTION COEFFICIENT =	.003019
FRICITION VELOCITY =	3.89672
LAW OF THE WALL CONSTANT (K) =	.41000
LAW OF THE WALL CONSTANT (C) =	5.00000
WAVE STRENGTH =	.56596
CLAUSERS "DELTA" INTEGPAL =	-2.52848
CLAUSERS "C" INTEGPAL =	18.54361
DISPLACEMENT THICKNESS - CONSTANT DENSITY =	.10213
MOMENTUM THICKNESS - CONSTANT DENSITY =	.07555
SHAPE FACTOR 12 - CONSTANT DENSITY =	1.35187

LOCATION -X- 60.25000

Z = -6 INCHES

Table 11.

JOE KLDC2 TAPE 3166R- FILES C1-21, RUNS 5.01-5.21 03/09/79
RUN NO. E. POINT 16. NO GRID

REDUCED PROFILE DATA

	Y	U	T	U-UF	THETA	U-UE	U(+)	T(+)	Y(+)
1	INCHES	DELT A	FT/SEC	DEG. F	U/UF	UTAU	8.697	5.159	8.819
2	.0046	.33.54	81.26	.340	.226	-16.725	9.363	6.676	11.295
3	.0066	.36.49	80.13	.370	.252	-15.965	10.218	7.500	13.200
4	.0078	.40.72	79.51	.406	.286	-14.243	11.117	8.117	14.915
5	.0084	.45.43	78.50	.439	.326	-13.673	12.359	8.774	17.816
6	.0113	.48.16	78.13	.460	.349	-12.973	12.939	9.365	19.915
7	.0117	.51.42	77.65	.511	.472	-12.393	13.136	9.993	22.629
8	.0021	.51.16	77.41	.519	.451	-11.785	13.547	10.316	24.248
9	.0024	.52.79	77.53	.535	.471	-11.517	13.814	10.831	26.320
10	.0124	.53.83	76.74	.545	.492	-11.253	14.078	11.520	36.520
11	.0126	.54.00	76.51	.556	.503	-11.058	14.273	11.648	39.105
12	.0127	.55.61	76.41	.560	.514	-10.791	14.476	11.845	42.344
13	.0127	.56.60	76.27	.574	.525	-10.648	14.675	12.369	45.582
14	.0127	.57.52	76.08	.580	.536	-10.476	14.875	12.569	49.010
15	.0142	.58.49	75.66	.592	.547	-10.346	15.036	12.658	53.391
16	.0142	.59.04	75.34	.606	.557	-9.510	15.390	12.888	56.249
17	.0142	.61.62	75.24	.624	.568	-9.182	15.612	13.421	67.968
18	.0142	.61.71	74.79	.635	.604	-8.958	15.820	13.820	81.063
19	.0142	.62.75	74.41	.646	.619	-8.692	16.034	14.251	95.106
20	.0142	.64.94	74.33	.657	.630	-8.442	16.242	14.415	106.535
21	.0142	.65.54	74.66	.670	.678	-8.207	17.124	14.580	119.297
22	.0142	.66.60	74.57	.685	.686	-7.968	17.363	14.769	124.631
23	.0142	.67.60	74.47	.697	.695	-7.793	17.578	15.056	158.536
24	.0142	.68.91	73.76	.698	.698	-7.648	17.684	15.194	163.298
25	.0145	.69.66	73.73	.706	.708	-7.455	17.677	15.284	195.889
26	.0145	.70.63	73.59	.715	.715	-7.257	18.124	15.429	209.585
27	.0145	.70.63	73.59	.719	.719	-7.124	18.393	15.655	220.251
28	.0145	.70.63	73.59	.726	.726	-6.938	18.559	15.813	223.589
29	.0145	.70.63	73.59	.733	.733	-6.772	18.524	16.214	226.622
30	.0145	.70.63	73.59	.747	.747	-6.608	18.636	16.474	231.205
31	.0145	.70.63	73.59	.761	.761	-6.495	19.636	16.816	246.635
32	.0145	.70.63	73.59	.775	.775	-5.326	20.006	17.030	250.030
33	.0145	.70.63	73.59	.790	.795	-5.333	20.298	17.255	251.326
34	.0145	.70.63	73.59	.801	.791	-4.732	20.658	17.621	254.256
35	.0145	.70.63	73.59	.814	.794	-4.393	17.931	18.655	260.585
36	.0145	.70.63	73.59	.827	.797	-4.126	21.276	18.841	260.622
37	.0145	.70.63	73.59	.837	.807	-3.934	21.498	19.581	261.506
38	.0145	.70.63	73.59	.849	.813	-3.556	21.776	19.132	264.563
39	.0145	.70.63	73.59	.860	.827	-3.036	22.206	19.527	271.326
40	.0145	.70.63	73.59	.869	.844	-2.564	22.768	19.648	278.642
41	.0145	.70.63	73.59	.872	.872	-2.089	23.636	20.423	284.626
42	.0145	.70.63	73.59	.883	.893	-1.696	23.675	20.825	291.547
43	.0145	.70.63	73.59	.889	.897	-1.326	24.355	21.182	298.026
44	.0145	.70.63	73.59	.890	.903	-0.977	24.694	21.553	304.7313
45	.0145	.70.63	73.59	.892	.903	-0.446	24.893	21.942	311.3.791
46	.0145	.70.63	73.59	.892	.903	-0.288	25.084	22.211	318.1.220
47	.0145	.70.63	73.59	.893	.903	-0.185	25.186	22.420	324.6.436
48	.0145	.70.63	73.59	.893	.903	-0.080	25.286	22.689	331.3.604
49	.0145	.70.63	73.59	.893	.903	-0.051	25.380	22.680	338.0.271
50	.0145	.70.63	73.59	.893	.903	-0.026	25.370	22.839	351.3.798
51	.0145	.70.63	73.59	.893	.903	-0.025	25.376	22.867	352.0.556
52	.0145	.70.63	73.59	.893	.903	-0.024	25.378	22.844	354.7.324
53	.0145	.70.63	73.59	.893	.903	-0.023	25.372	22.885	351.3.991
54	.0145	.70.63	73.59	.893	.903	-0.023	25.374	22.868	357.8.421
55	.0145	.70.63	73.59	.893	.903	-0.023	25.378	22.854	364.7.137
56	.0145	.70.63	73.59	.893	.903	-0.023	25.380	22.854	369.0.413
57	.0145	.70.63	73.59	.893	.903	-0.023	25.382	22.749	374.6.482
58	.0145	.70.63	73.59	.893	.903	-0.023	25.384	22.750	375.0.432
59	.0145	.70.63	73.59	.893	.903	-0.023	25.386	22.751	376.6.203
60	.0145	.70.63	73.59	.893	.903	-0.023	25.388	22.752	377.2.003
61	.0145	.70.63	73.59	.893	.903	-0.023	25.390	22.753	378.8.003
62	.0145	.70.63	73.59	.893	.903	-0.023	25.392	22.754	379.4.003
63	.0145	.70.63	73.59	.893	.903	-0.023	25.394	22.755	380.0.403
64	.0145	.70.63	73.59	.893	.903	-0.023	25.396	22.756	380.6.402
65	.0145	.70.63	73.59	.893	.903	-0.023	25.398	22.757	381.2.402
66	.0145	.70.63	73.59	.893	.903	-0.023	25.400	22.758	381.8.402
67	.0145	.70.63	73.59	.893	.903	-0.023	25.402	22.759	382.4.402
68	.0145	.70.63	73.59	.893	.903	-0.023	25.404	22.760	383.0.402
69	.0145	.70.63	73.59	.893	.903	-0.023	25.406	22.761	383.6.402

Table 11.

JOB KLD02 TAPE 31CLR- FILFS 01-21, RUNS 5.01-5.21 03/09/79

RUN NO. 5. POINT 17. NO GRID

BOUNDARY LAYER PROPERTIES

LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYERED FUNCTION FROM WALL TO $y+=35$
------------------------------------	------------------------------------------------------------

FREE STREAM VELOCITY	=	99.470	99.470
FREE STREAM TEMPERATURE	=	68.758	
WALL TEMPERATURE	=	85.450	
WALL HEAT FLUX	=	.05012	
FREE STREAM DENSITY	=	.07555	
FREE STREAM KINEMATIC VISCOSITY	=	.0001615	
DENSITY OF FLUID AT WALL	=	.07324	
KINEMATIC VISCOSITY OF FLUID AT WALL	=	.0001707	
WALL/FREE STREAM DENSITY RATIO	=	.96938	
LOCATION REYNOLDS NUMBER (REX)	=	3500001.19	
INPUT VALUE OF VELOCITY DELTA	=	.98000	
INPUT VALUE OF TEMPERATURE DELTA	=	.98000	
CALCULATED DELTA DELTA 99.5% INPUT	=	.91669	
DISPLACEMENT THICKNESS (DELSTAR)	=	.00000	
MOMENTUM THICKNESS (THETA)	=	.13832	.13846
ENERGY-DISSIPATION THICKNESS	=	.09764	.09777
ENTHALPY THICKNESS	=	.17257	.17262
SHAPE FACTOR 12 (DELSTAR/THETA)	=	.00320	.00321
SHAPE FACTOR 32 (ENFPGY/THETA)	=	1.41664	1.41621
MOMENTUM THICKNESS REYNOLDS NUMBER	=	1.76741	1.76568
DISPLACEMENT THICKNESS REYNOLDS NUMBER	=	5010.87	5017.25
SKIN FRICTION COEFFICIENT	=	7098.62	7105.52
FRICITION VELOCITY	=	.002851	
LAW OF THE WALL CONSTANT (K)	=	3.81464	
LAW OF THE WALL CONSTANT (C)	=	.41000	
WAKE STRENGTH	=	5.00000	
CLAUSERS "DELTA" INTEGRAL	=	.59918	
CLAUSERS "C" INTEGRAL	=	-3.39474	-3.52679
DISPLACEMENT THICKNESS - CONSTANT DENSITY	=	24.99203	24.99519
MOMENTUM THICKNESS - CONSTANT DENSITY	=	.13265	.13525
SHAPE FACTOR 12 - CONSTANT DENSITY	=	.09836	.09849
		1.34862	1.37323
LOCATION -X-	=	68.20000	
Z = CENTERLINE			

Table 12.

JRC KLD22 TAPE 3166P- FILES D1-21, RUNS 5-D1-E-21 03/09/79

RUN NO. 5. POINT 17. NO GRID

REDUCED PROFILE DATA

	Y INCHES	Y/ DELT A	U FT/SEC	T DEG. F	U/UF	THETA	U-UF UTAU	U(+)	T(+)	Y(+)
1	• 2049	30.02	81.72	• 311	• 247	-17.970	8.105	• 524	• 187	
2	• 2065	37.08	80.18	• 373	• 310	-16.356	9.719	• 056	12.163	
3	• 2072	40.40	79.66	• 406	• 323	-15.460	10.500	7.878	14.266	
4	• 2074	44.05	78.03	• 452	• 426	-14.280	11.795	9.576	17.565	
5	• 2074	47.09	79.03	• 482	• 445	-13.496	12.580	9.929	21.290	
6	• 2074	50.76	77.56	• 487	• 473	-12.866	13.272	10.554	25.575	
7	• 2074	51.47	77.29	• 517	• 486	-12.603	13.473	10.518	27.810	
8	• 2074	52.37	77.01	• 526	• 506	-12.346	13.728	11.297	30.604	
9	• 2074	53.20	76.79	• 535	• 519	-12.116	13.962	11.589	33.957	
10	• 2074	54.09	76.60	• 544	• 530	-11.896	14.180	11.840	37.662	
11	• 2074	54.04	76.33	• 552	• 543	-11.675	14.471	12.129	41.508	
12	• 2074	55.73	76.24	• 556	• 552	-11.572	14.504	12.327	44.574	
13	• 2074	57.71	75.82	• 570	• 577	-11.051	15.025	12.877	56.709	
14	• 2074	58.50	75.56	• 592	• 593	-10.641	15.475	13.236	69.534	
15	• 2074	60.20	75.22	• 615	• 613	-10.278	15.706	13.692	82.386	
16	• 2074	61.41	74.98	• 617	• 627	-9.676	16.100	14.058	93.935	
17	• 2074	62.55	74.79	• 619	• 640	-9.678	16.398	14.258	1C7.160	
18	• 2074	63.71	74.65	• 644	• 647	-9.375	16.701	14.454	11.648	
19	• 2074	64.32	74.55	• 647	• 653	-9.214	16.862	14.575	131.502	
20	• 2074	65.31	74.55	• 657	• 665	-8.954	17.122	14.843	144.227	
21	• 2074	66.13	74.37	• 665	• 668	-8.741	17.335	14.914	157.266	
22	• 2074	67.05	74.27	• 670	• 674	-8.606	17.470	15.053	168.256	
23	• 2074	68.00	74.27	• 678	• 695	-8.366	17.690	15.203	181.481	
24	• 2074	68.76	73.97	• 684	• 694	-8.233	17.843	15.494	194.519	
25	• 2074	69.71	73.76	• 691	• 699	-8.061	18.015	15.611	205.982	
26	• 2074	70.72	73.71	• 697	• 703	-7.964	18.172	15.702	218.362	
27	• 2074	71.70	73.67	• 701	• 712	-7.855	18.271	15.896	231.601	
28	• 2074	72.65	73.77	• 715	• 724	-7.443	18.633	16.164	263.066	
29	• 2074	73.62	73.77	• 726	• 727	-7.133	18.943	16.454	296.222	
30	• 2074	74.60	73.77	• 730	• 750	-6.818	19.255	16.742	328.846	
31	• 2074	75.56	73.97	• 752	• 758	-6.471	19.624	16.927	362.347	
32	• 2074	76.52	73.76	• 761	• 766	-6.226	19.850	17.109	393.267	
33	• 2074	77.49	73.71	• 773	• 777	-5.915	20.161	17.356	427.354	
34	• 2074	78.46	72.33	• 782	• 786	-5.697	20.379	17.549	458.647	
35	• 2074	79.44	72.15	• 791	• 797	-5.445	20.671	17.786	492.175	
36	• 2074	80.46	72.04	• 801	• 806	-5.195	20.881	17.996	523.655	
37	• 2074	81.46	72.04	• 811	• 814	-4.932	21.144	18.182	557.183	
38	• 2074	82.46	71.86	• 814	• 825	-4.633	21.643	18.421	622.935	
39	• 2074	83.46	71.68	• 830	• 845	-4.410	22.166	18.876	687.943	
40	• 2074	84.46	71.54	• 844	• 856	-3.577	22.409	19.104	783.509	
41	• 2074	85.46	71.41	• 851	• 867	-3.132	22.943	19.357	818.703	
42	• 2074	86.46	71.32	• 857	• 876	-2.798	23.278	19.747	883.524	
43	• 2074	87.46	71.27	• 864	• 887	-2.431	23.645	20.125	948.532	
44	• 2074	88.46	71.27	• 870	• 897	-2.095	23.981	20.324	1014.284	
45	• 2074	89.46	71.27	• 876	• 918	-1.755	24.321	20.491	1179.125	
46	• 2074	90.46	71.17	• 884	• 929	-1.465	24.611	20.745	1144.299	
47	• 2074	91.46	71.07	• 891	• 943	-1.201	24.875	21.067	1209.493	
48	• 2074	92.46	70.99	• 901	• 950	-0.941	25.135	21.224	1274.873	
49	• 2074	93.46	70.93	• 907	• 962	-0.740	25.336	21.420	1340.253	
50	• 2074	94.46	70.85	• 913	• 972	-0.577	25.577	21.696	1405.633	
51	• 2074	95.46	70.76	• 919	• 978	-0.360	25.716	21.831	1470.268	
52	• 2074	96.46	70.67	• 924	• 984	-0.239	25.837	21.976	1535.834	
53	• 2074	97.46	70.58	• 929	• 992	-0.145	25.931	22.145	1600.283	
54	• 2074	98.46	70.52	• 934	• 994	-0.067	25.989	22.197	1665.877	
55	• 2074	99.46	70.46	• 937	• 997	-0.034	26.042	22.265	1731.843	
56	• 2074	100.46	70.36	• 941	• 999	-0.030	26.046	22.296	1796.600	
57	• 2074	101.46	70.27	• 946	• 998	-0.037	26.068	22.363	1861.989	
58	• 2074	102.46	70.17	• 950	• 998	-0.037	26.079	22.357	1902.204	
59	• 2074	103.46	70.07	• 955	• 999	-0.034	26.086	22.347	1925.392	
60	• 2074	104.46	69.98	• 959	• 999	-0.031	26.093	22.392	1957.932	
61	• 2074	105.46	69.90	• 961	• 999	-0.021	26.098	22.495	1989.917	
62	• 2074	106.46	69.86	• 961	• 994	-0.013	26.103	22.495	2052.335	
63	• 2074	107.46	69.81	• 961	• 997	-0.012	26.108	22.495	2052.335	
64	• 2074	108.46	69.74	• 964	• 995	-0.017	26.059	22.227	2058.601	

Table 12.

JOE KLD02 TAPE 3166R- FILES 01-21, RUNS 5.01-5.21 03/29/79

RUN NO. 5. POINT 18. NO GRID

BOUNDARY LAYER PROPERTIES

		STANDARD LINEAR INTERPOLATION	SUBLAYER FUNCTION FROM TO WALL WALL TO Y+ = 35
FREE STREAM VELOCITY	= 99.313		99.313
FREE STREAM TEMPERATURE	= 68.674		
WALL TEMPERATURE	= 85.360		
WALL HEAT FLUX	= .84968		
FREE STREAM DENSITY	= .07556		
FREE STREAM KINEMATIC VISCOSITY	= .0001615		
DENSITY OF FLUID AT WALL	= .07325		
KINEMATIC VISCOSITY OF FLUID AT WALL	= .0001706		
WALL/FREE STREAM DENSITY RATIO	= .96939		
LOCATION REYNOLDS NUMBER (REX)	= 3901397.53		
INPUT VALUE OF VELOCITY DELTA	= 1.15000		
INPUT VALUE OF TEMPERATURE DELTA	= 1.15000		
CALCULATED DELTA			1.03442
DELTA 99.5% INPUT	= .00000		
DISPLACEMENT THICKNESS (DELSTAR)	= .15330		.15355
MOMENTUM THICKNESS (THETA)	= .10874		.10880
ENERGY-DISSIPATION THICKNESS	= .19236		.19231
ENTHALPY THICKNESS	= .00375		.00375
SHAPE FACTOR 12 (DELSTAR/THETA)	= 1.40987		1.41132
SHAPE FACTOR 32 (ENERGY/THETA)	= 1.76904		1.76756
MOMENTUM THICKNESS REYNOLDS NUMBER	= 5573.07		5576.46
DISPLACEMENT THICKNESS REYNOLDS NUMBER	= 7557.31		7870.19
SKIN FRICTION COEFFICIENT	= .002807		
FRICTION VELOCITY	= 3.77872		
LAW OF THE WALL CONSTANT (K)	= .41000		
LAW OF THE WALL CONSTANT (C)	= 5.00000		
WAKE STRENGTH			.58565
CLAUSER'S "DELTA" INTEGPAL	= -3.80619		-3.93718
CLAUSER'S "G" INTEGPAL	= 27.62262		27.75020
DISPLACEMENT THICKNESS - CONSTANT DENSITY	= .14718		.14980
MOMENTUM THICKNESS - CONSTANT DENSITY	= .10956		.10963
SHAPE FACTOR 12 - CONSTANT DENSITY	= 1.34341		1.36645

LOCATION -X- 76.12000

Z = CENTERLINE

Table 13.

JCH KLD02 TAPE 3166R- FILES C1-21, PUNS 5.01-5.21 03/09/79

RUN NO. 5. POTNT 18. NO GRID

REFINED PROFILE DATA

	Y/	U	T	U/UF	THE TA	UTAU	U(+)	T(+)	Y(+)
N	INCHES	DELTA	FT/SEC	DEG.F					
1	1	32.27	81.30	•321	•243	-17.5P3	8.609	•430	8.732
2	1	34.77	80.81	•340	•201	-17.186	9.298	•428	10.576
3	1	37.75	79.86	•380	•330	-16.929	9.469	•352	12.606
4	1	41.25	78.95	•415	•354	-15.768	10.944	•452	14.452
5	1	44.76	78.34	•445	•384	-14.588	11.694	•575	16.451
6	1	49.05	78.14	•485	•421	-13.583	12.356	•382	20.173
7	1	51.24	77.67	•510	•473	-13.564	12.715	•651	21.465
8	1	54.46	77.36	•540	•479	-12.721	13.218	•278	25.717
9	1	55.83	76.73	•550	•407	-12.856	13.561	•692	29.032
10	1	56.16	76.22	•560	•514	-12.053	13.826	•98	32.170
11	1	57.74	75.83	•581	•529	-11.870	14.022	•469	35.329
12	1	58.24	75.31	•589	•481	-11.507	14.227	•609	38.261
13	1	61.51	75.16	•629	•553	-11.420	14.424	•717	41.082
14	1	62.72	74.60	•630	•571	-11.420	14.662	•644	45.644
15	1	64.06	74.03	•640	•589	-10.606	15.676	•019	49.334
16	1	64.12	73.81	•601	•602	-10.266	16.118	•731	61.731
17	1	64.73	73.21	•619	•611	-10.005	16.277	•651	76.651
18	1	65.24	72.51	•629	•626	-9.720	16.563	•529	89.529
19	1	66.64	71.91	•643	•638	-9.522	16.760	•637	100.529
20	1	66.70	71.63	•647	•643	-9.284	16.998	•637	113.740
21	1	66.94	71.52	•656	•650	-9.041	17.241	•240	126.660
22	1	66.99	71.27	•664	•655	-8.831	17.451	•407	137.180
23	1	67.63	70.93	•675	•670	-8.533	17.548	•627	140.470
24	1	68.01	70.59	•681	•682	-8.385	17.749	•057	147.222
25	1	68.06	70.36	•689	•691	-8.154	17.898	•146	149.942
26	1	68.17	70.27	•697	•694	-7.964	18.126	•219	211.305
27	1	68.27	70.27	•709	•707	-7.635	18.315	•490	224.121
28	1	68.37	70.23	•723	•720	-7.318	18.570	•225	237.225
29	1	68.63	70.03	•731	•727	-7.068	19.004	•601	268.601
30	1	68.77	70.03	•743	•740	-6.745	19.214	•562	301.270
31	1	68.97	70.03	•753	•747	-6.497	19.517	•569	333.569
32	1	69.04	70.03	•761	•756	-6.295	19.785	•671	366.422
33	1	69.17	70.03	•771	•766	-6.016	19.902	•662	398.168
34	1	69.24	70.03	•774	•765	-5.732	20.051	•545	421.021
35	1	69.50	70.03	•786	•786	-5.559	20.220	•620	462.397
36	1	69.57	70.03	•795	•795	-5.279	20.562	•587	495.455
37	1	69.64	70.03	•802	•817	-4.969	21.091	•220	527.181
38	1	69.74	70.03	•811	•817	-4.691	21.591	•671	555.455
39	1	69.87	70.03	•822	•827	-4.421	22.162	•323	580.323
40	1	69.94	70.03	•823	•827	-4.121	22.753	•138	616.667
41	1	70.04	70.03	•831	•831	-3.823	23.300	•444	646.667
42	1	70.11	70.03	•838	•838	-3.529	23.752	•433	686.633
43	1	70.17	70.03	•843	•843	-3.231	24.215	•055	729.055
44	1	70.24	70.03	•854	•854	-2.931	24.641	•316	769.461
45	1	70.29	70.03	•866	•866	-2.631	25.120	•810	812.621
46	1	70.36	70.03	•874	•874	-2.331	25.372	•131	851.935
47	1	70.44	70.03	•882	•882	-2.031	25.667	•450	891.833
48	1	70.50	70.03	•887	•887	-1.731	25.924	•633	931.439
49	1	70.57	70.03	•894	•894	-1.431	26.078	•897	970.814
50	1	70.64	70.03	•901	•901	-1.131	26.173	•052	1004.758
51	1	70.71	70.03	•908	•908	-0.831	26.266	•160	1044.125
52	1	70.77	70.03	•915	•915	-0.531	26.283	•210	1084.284
53	1	70.84	70.03	•921	•921	-0.231	26.309	•307	1128.444
54	1	70.91	70.03	•928	•928	-0.031	26.329	•312	1166.395
55	1	70.97	70.03	•933	•933	-0.131	26.346	•2474	1247.185
56	1	71.04	70.03	•947	•947	-0.915	26.363	•266	1286.607
57	1	71.11	70.03	•951	•951	-0.615	26.380	•230	1325.621
58	1	71.17	70.03	•956	•956	-0.315	26.392	•230	1369.461
59	1	71.24	70.03	•961	•961	-0.015	26.410	•210	1409.433
60	1	71.31	70.03	•967	•967	-0.315	26.428	•210	1451.833
61	1	71.38	70.03	•970	•970	-0.015	26.446	•210	1492.439
62	1	71.44	70.03	•974	•974	-0.315	26.464	•210	1533.833
63	1	71.50	70.03	•978	•978	-0.015	26.482	•210	1571.439
64	1	71.56	70.03	•981	•981	-0.315	26.500	•210	1609.414
65	1	71.62	70.03	•988	•988	-0.015	26.518	•210	1648.758
66	1	71.68	70.03	•993	•993	-0.315	26.536	•210	1689.441
67	1	71.74	70.03	•995	•995	-0.015	26.554	•210	1729.125
68	1	71.79	70.03	•997	•997	-0.315	26.572	•210	1769.055
69	1	71.84	70.03	•999	•999	-0.015	26.590	•210	1808.461
70	1	71.89	70.03	•999	•999	-0.315	26.608	•210	1847.461
71	1	71.94	70.03	•999	•999	-0.015	26.626	•210	1886.461

Table 13.

JOB KLD02 TAPE 3166R- FILES C1-21, PUNS 5.01-E.21 03/09/79
 RUN NO. 5. POINT 19. NO GRID

BOUNDARY LAYER PROPERTIES

	STANDARD LINEAR INTERPOLATION TO WALL	SUPERLAYER FUNCTION FROM WALL TO Y+ = 35
FREE STREAM VELOCITY =	99.216	99.216
FREE STREAM TEMPERATURE =	68.650	
WALL TEMPERATURE =	85.320	
WALL HEAT FLUX =	.05023	
FREE STREAM DENSITY =	.07557	
FREE STREAM KINEMATIC VISCOSITY =	.0001615	
DENSITY OF FLUID AT WALL =	.07326	
KINEMATIC VISCOSITY OF FLUID AT WALL =	.0001706	
WALL/FREE STREAM DENSITY RATIO =	.96941	
LOCATION REYNOLDS NUMBER (REX) =	38978E5.16	
INPUT VALUE OF VELOCITY DELTA =	1.00000	
INPUT VALUE OF TEMPERATURE DELTA =	1.20000	
CALCULATED DELTA =		1.02303
DELTA 99.5% INPUT =	.00000	
DISPLACEMENT THICKNESS (DELSTAR) =	.15391	.15404
MOMENTUM THICKNESS (THETA) =	.10885	
ENERGY-DISSIPATION THICKNESS =	.19235	
ENTHALPY THICKNESS =	.00397	
SHAPE FACTOR 12 (DELSTAR/THETA) =	1.41530	1.41512
SHAPE FACTOR 32 (ENERGY/THETA) =	1.76731	
MOMENTUM THICKNESS REYNOLDS NUMBER =	5568.62	5574.14
DISPLACEMENT THICKNESS REYNOLDS NUMBER =	7881.25	7888.09
SKIN FRICTION COEFFICIENT =	.002785	
FRICTION VELOCITY =	3.76024	
LAW OF THE WALL CONSTANT (K) =	.41000	
LAW OF THE WALL CONSTANT (C) =	5.00000	
WAKE STRENGTH =		.61476
CLAESERS "DELTA" INTEGRAL =	-3.82406	-3.06070
CLAESERS "C" INTEGRAL =	2P.05329	2P.10847
DISPLACEMENT THICKNESS - CONSTANT DENSITY =	.14744	.15009
MOMENTUM THICKNESS - CONSTANT DENSITY =	.10961	.10972
SHAPE FACTOR 12 - CONSTANT DENSITY =	1.34521	1.36798

LOCATION -X- 76.12000
 Z = +6 INCHES

Table 14.

JOB KLD02 TAPE 3166P- FILES 01-21, RUNS 5.01-5.21 03/09/79

RUN NO. E. POINT 19. NO GRID

REDUCED PROFILE DATA

N	Y INCHES	V/ DELTA	U FT/SEC	T DEG.F	U/U _F	THF/T _A	U-U _F	U(U _F)	T(U _F)	V(U _F)
1	• 00562	• 025	30.72	60.91	• 323	• 265	-17.871	5.515	5.8C4	9.240
2	• 00727	• 025	35.72	60.91	• 323	• 211	-17.024	9.362	6.829	11.628
3	• 00881	• 025	39.49	70.64	• 328	• 341	-16.149	7.478	8.097	13.281
4	• 00977	• 025	41.15	70.17	• 415	• 369	-15.441	10.236	8.707	15.118
5	• 01042	• 025	44.52	78.70	• 449	• 267	-14.547	11.839	9.043	17.077
6	• 01117	• 025	46.74	78.13	• 466	• 412	-14.087	12.298	9.466	20.077
7	• 01182	• 025	47.04	78.90	• 483	• 431	-13.636	12.757	9.466	22.533
8	• 01247	• 025	49.50	77.67	• 490	• 459	-13.221	13.565	10.429	26.139
9	• 01312	• 025	50.92	77.40	• 513	• 475	-12.841	13.544	10.733	29.013
10	• 01377	• 025	50.74	76.99	• 532	• 549	-12.350	13.027	10.962	33.042
11	• 01442	• 025	53.19	76.86	• 544	• 500	-12.356	14.027	11.135	36.242
12	• 01507	• 025	54.55	76.52	• 556	• 528	-12.029	14.356	11.340	38.813
13	• 01572	• 025	55.40	76.52	• 558	• 517	-11.676	14.529	11.585	42.120
14	• 01637	• 025	55.73	76.78	• 560	• 528	-11.652	14.574	11.761	46.528
15	• 01702	• 025	55.77	76.71	• 562	• 541	-11.553	14.832	11.859	52.774
16	• 01767	• 025	55.77	76.74	• 567	• 557	-11.166	15.215	12.211	64.530
17	• 01832	• 025	56.08	75.86	• 565	• 560	-10.674	15.711	12.720	76.127
18	• 01897	• 025	56.08	75.85	• 566	• 562	-10.416	15.569	12.981	90.430
19	• 01962	• 025	56.08	75.85	• 566	• 616	-10.143	16.243	13.153	101.635
20	• 02027	• 025	56.41	74.01	• 567	• 607	-9.797	16.589	13.307	114.126
21	• 02092	• 025	56.41	74.01	• 568	• 624	-9.533	16.633	13.605	127.351
22	• 02157	• 025	56.41	74.01	• 569	• 631	-9.349	17.299	13.850	138.373
23	• 02222	• 025	56.41	74.01	• 569	• 641	-9.156	17.766	14.071	150.496
24	• 02287	• 025	56.41	74.01	• 569	• 646	-8.981	17.475	14.178	163.722
25	• 02352	• 025	56.41	74.01	• 569	• 650	-8.797	17.548	14.263	174.376
26	• 02417	• 025	56.41	74.01	• 569	• 660	-8.589	17.926	14.488	187.418
27	• 02482	• 025	56.41	74.01	• 569	• 663	-8.459	17.926	14.551	200.092
28	• 02547	• 025	56.41	74.01	• 569	• 669	-8.297	18.029	14.672	211.665
29	• 02612	• 025	56.41	74.01	• 569	• 676	-8.158	18.237	14.824	223.788
30	• 02677	• 025	56.41	74.01	• 569	• 682	-7.986	18.399	14.959	237.781
31	• 02742	• 025	56.41	74.01	• 569	• 694	-7.655	18.731	15.217	268.792
32	• 02807	• 025	56.41	74.01	• 569	• 707	-7.318	19.068	15.519	300.570
33	• 02872	• 025	56.41	74.01	• 569	• 721	-7.002	19.384	15.828	332.716
34	• 02937	• 025	56.41	74.01	• 569	• 729	-6.722	19.664	16.000	365.596
35	• 03002	• 025	56.41	74.01	• 569	• 727	-6.481	19.904	16.163	397.747
36	• 03067	• 025	56.41	74.01	• 569	• 748	-6.177	20.206	16.407	429.887
37	• 03132	• 025	56.41	74.01	• 569	• 755	-5.986	20.399	16.572	461.298
38	• 03197	• 025	56.41	74.01	• 569	• 764	-5.708	20.675	16.764	495.797
39	• 03262	• 025	56.41	74.01	• 569	• 775	-5.535	20.647	17.003	526.147
40	• 03327	• 025	56.41	74.01	• 569	• 784	-5.296	21.000	17.199	559.720
41	• 03392	• 025	56.41	74.01	• 569	• 794	-4.679	21.776	17.646	653.836
42	• 03457	• 025	56.41	74.01	• 569	• 805	-4.113	22.273	18.099	747.301
43	• 03522	• 025	56.41	74.01	• 569	• 812	-3.547	22.838	18.474	842.820
44	• 03587	• 025	56.41	74.01	• 569	• 820	-3.032	23.353	18.915	936.522
45	• 03652	• 025	56.41	74.01	• 569	• 828	-2.636	23.660	19.288	1034.223
46	• 03717	• 025	56.41	74.01	• 569	• 836	-2.081	24.304	19.710	1130.667
47	• 03782	• 025	56.41	74.01	• 569	• 843	-1.652	24.733	20.078	1224.709
48	• 03847	• 025	56.41	74.01	• 569	• 854	-1.296	25.095	20.358	1320.227
49	• 03912	• 025	56.41	74.01	• 569	• 864	-0.947	25.439	20.688	1415.378
50	• 03977	• 025	56.41	74.01	• 569	• 870	-0.633	25.752	20.989	1509.799
51	• 04042	• 025	56.41	74.01	• 569	• 876	-0.395	25.991	21.292	1605.312
52	• 04107	• 025	56.41	74.01	• 569	• 880	-0.216	26.170	21.503	1701.565
53	• 04172	• 025	56.41	74.01	• 569	• 885	-0.098	26.288	21.606	1796.349
54	• 04237	• 025	56.41	74.01	• 569	• 890	-0.03	26.383	21.697	1891.899
55	• 04297	1.025	56.41	74.01	1.000	• 994	-0.011	26.375	21.826	1981.834
56	• 04362	1.025	56.41	74.01	1.000	• 998	-0.001	26.397	21.927	2176.585
57	• 04427	1.025	56.41	74.01	1.000	• 999	-0.002	26.394	21.925	2272.103
58	• 04492	1.025	56.41	74.01	1.000	• 999	-0.003	26.395	21.935	2367.804
59	• 04557	1.025	56.41	74.01	1.000	• 999	-0.004	26.396	21.965	2558.290
60	• 04622	1.025	56.41	74.01	1.000	• 999	-0.005	26.397	21.949	2748.224
61	• 04687	1.025	56.41	74.01	1.000	• 999	-0.006	26.398	21.931	2843.026
62	• 04752	1.025	56.41	74.01	1.000	• 999	-0.007	26.399	21.925	2938.894
63	• 04817	1.025	56.41	74.01	1.000	• 999	-0.008	26.391	21.913	3035.330
64	• 04882	1.025	56.41	74.01	1.000	• 999	-0.009	26.392	21.906	3130.297
65	• 04947	1.025	56.41	74.01	1.000	• 999	-0.010	26.393	21.910	3225.303
66	• 05012	1.025	56.41	74.01	1.000	• 999	-0.011	26.394	21.912	3226.676
67	• 05077	1.025	56.41	74.01	1.000	• 999	-0.012	26.395	21.912	3226.676
68	• 05142	1.025	56.41	74.01	1.000	• 999	-0.013	26.396	21.912	3226.676
69	• 05207	1.025	56.41	74.01	1.000	• 999	-0.014	26.397	21.912	3226.676
70	• 05272	1.025	56.41	74.01	1.000	• 999	-0.015	26.398	21.912	3226.676
71	• 05337	1.025	56.41	74.01	1.000	• 999	-0.016	26.398	21.912	3226.676

Table 14.

JOB KLD22 TAPE 3166R- FILES 01-21, RUNS 5.01-5.21 03/09/79

RUN NO. F. POINT 2C. NO GRID

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SURFACE FUNCTION FROM WALL TO Y+=35
FREE STREAM VELOCITY	99.452	99.452
FREE STREAM TEMPERATURE	68.400	
WALL TEMPERATURE	84.850	
WALL HEAT FLUX	.04985	
FREE STREAM DENSITY	.07538	
FREE STREAM KINEMATIC VISCOSITY	.0001618	
DENSITY OF FLUID AT WALL	.07310	
KINEMATIC VISCOSITY OF FLUID AT WALL	.0001708	
WALL/FREE STREAM DENSITY RATIO	.96979	
LOCATION REYNOLDS NUMBER (REY)	3898767.47	
INPUT VALUE OF VELOCITY DELTA	1.00000	
INPUT VALUE OF TEMPERATURE DELTA	1.05000	
CALCULATED DELTA		.92057
DELTA 59.5% INPUT	.00000	
DISPLACEMENT THICKNESS (DELSTAR)	.14019	.14035
MOMENTUM THICKNESS (THETA)	.09830	.09844
ENERGY-DISSIPATION THICKNESS	.17360	.17365
ENTHALPY THICKNESS	.00371	.00371
SHAPE FACTOR 12 (DELSTAR/THETA)	1.42610	1.42572
SHAPE FACTOR 32 (ENERGY/THETA)	1.76603	1.76397
MOMENTUM THICKNESS REYNOLDS NUMBER	5034.87	5042.06
DISPLACEMENT THICKNESS REYNOLDS NUMBER	7182.24	7188.56
SKIN FRICTION COEFFICIENT	.002830	
FRICTION VELOCITY	3.79868	
LAW OF THE WALL CONSTANT (K)	.41000	
LAW OF THE WALL CONSTANT (C)	5.00000	
WAKE STRENGTH		.62089
CLAUSER'S "DELTA" INTEGRAL	-3.42801	-3.57733
CLAUSER'S "G" INTEGRAL	25.60153	25.61305
DISPLACEMENT THICKNESS - CONSTANT DENSITY	.13371	.13664
MOMENTUM THICKNESS - CONSTANT DENSITY	.09912	.09926
SHAPE FACTOR 12 - CONSTANT DENSITY	1.34898	1.37649

LOCATION -X- 76.12020
Z = -6 INCHES

Table 15.

JOB KLD02 TAPE 3166R- FILES C1-21, PUNS 5.01-5.21 03/09/79

RUN NO. 5. POINT 20. NO GRID

REFINED PROFILE DATA

N	I	Y INCHES	Y/	U DELTA	Ft/sec	T DEG F	U/Uf	THETA	U-UE	U+1	T(+)	Y(+)
1	2	.0055	.005	35.06	80.21	.353	.252	-16.951	9.229	6.198	12.656	10.247
3	4	.0066	.006	35.07	80.21	.353	.252	-16.155	10.025	7.154	14.509	12.656
5	6	.0078	.007	40.00	79.79	.410	.350	-15.439	10.741	7.707	14.509	14.509
7	8	.0089	.008	43.38	76.69	.436	.374	-14.761	11.418	8.232	16.362	16.362
9	10	.0095	.009	45.37	78.33	.456	.397	-14.237	11.942	8.722	18.215	18.215
11	12	.0112	.011	47.67	77.62	.479	.421	-13.631	12.599	9.269	20.995	20.995
13	14	.0117	.011	49.15	77.67	.494	.446	-13.242	12.938	9.593	23.775	23.775
15	16	.0136	.013	50.05	77.52	.503	.477	-13.005	13.174	9.799	25.628	25.628
17	18	.0160	.017	51.71	77.16	.520	.468	-12.566	13.611	10.282	29.704	29.704
19	20	.0198	.022	52.05	77.01	.540	.477	-12.268	13.971	10.482	33.810	33.810
21	22	.0214	.023	54.73	76.82	.546	.468	-12.036	14.144	12.736	36.746	36.746
23	24	.0226	.025	54.72	76.61	.550	.501	-11.981	14.209	11.012	39.711	39.711
25	26	.0248	.027	54.63	76.45	.557	.522	-11.565	14.554	11.232	41.934	41.934
27	28	.0256	.029	56.16	76.35	.565	.517	-11.397	14.783	11.361	45.640	45.640
29	30	.0266	.021	56.44	76.23	.568	.521	-11.311	14.866	11.459	49.346	49.346
31	32	.0273	.023	56.09	76.14	.573	.520	-11.178	15.031	11.647	53.053	53.053
33	34	.0273	.024	52.46	75.72	.588	.555	-11.043	15.398	12.211	56.388	56.388
35	36	.0286	.025	50.03	75.43	.602	.573	-10.983	15.709	12.600	67.877	67.877
37	38	.0291	.026	61.15	75.24	.615	.584	-10.931	16.096	12.852	94.561	94.561
39	40	.0296	.027	62.12	75.06	.625	.605	-9.828	16.351	13.094	105.308	105.308
41	42	.0298	.028	62.70	74.88	.636	.626	-9.757	16.652	13.325	118.836	118.836
43	44	.0299	.029	63.36	74.73	.646	.615	-9.266	16.913	13.535	131.807	131.807
45	46	.0304	.030	64.92	74.60	.653	.623	-9.090	17.089	13.700	142.554	142.554
47	48	.0307	.031	65.75	74.54	.661	.627	-8.885	17.205	13.779	155.711	155.711
49	50	.0307	.032	66.49	74.34	.669	.629	-8.672	17.501	14.047	168.126	168.126
51	52	.0307	.033	67.16	74.25	.675	.644	-8.501	17.678	14.174	179.759	179.759
53	54	.0309	.034	67.73	74.13	.681	.652	-8.351	17.829	14.338	192.957	192.957
55	56	.0313	.035	68.12	74.02	.687	.658	-8.163	17.990	14.476	205.558	205.558
57	58	.0313	.036	68.55	74.02	.692	.659	-8.056	18.123	14.493	216.305	216.305
59	60	.0317	.037	69.61	73.96	.700	.662	-7.859	18.321	14.560	229.833	229.833
61	62	.0317	.038	69.99	73.86	.704	.668	-7.755	18.424	14.688	242.363	242.363
63	64	.0317	.039	71.23	73.61	.716	.683	-7.428	18.751	15.032	273.750	273.750
65	66	.0318	.040	72.61	73.41	.719	.695	-7.365	19.114	15.294	338.363	338.363
67	68	.0318	.041	73.76	73.14	.729	.712	-6.764	19.416	15.650	338.236	338.236
69	70	.0318	.042	72.92	72.78	.733	.725	-6.655	19.724	15.943	372.146	372.146
71	72	.0317	.043	72.76	72.78	.734	.664	-6.169	20.010	16.137	403.648	403.648
73	74	.0316	.044	72.64	72.78	.735	.742	-5.698	20.282	16.316	436.532	436.532
75	76	.0316	.045	72.47	72.47	.739	.762	-5.689	20.490	16.552	468.319	468.319
77	78	.0316	.046	72.42	72.42	.743	.762	-5.422	20.758	16.752	502.415	502.415
79	80	.0316	.047	72.01	72.01	.803	.775	-5.165	21.014	17.041	533.361	533.361
81	82	.0316	.048	71.60	71.25	.813	.791	-4.902	21.276	17.167	566.716	566.716
83	84	.0316	.049	71.25	71.25	.839	.806	-4.221	21.558	17.121	662.332	662.332
85	86	.0316	.050	70.79	70.79	.863	.827	-3.909	22.071	18.178	757.023	757.023
87	88	.0316	.051	70.72	70.72	.865	.855	-3.000	23.179	18.799	853.566	853.566
89	90	.0316	.052	70.72	70.45	.876	.876	-2.844	23.696	19.257	850.295	850.295
91	92	.0316	.053	70.73	70.13	.895	.845	-1.953	24.227	19.683	1046.654	1046.654
93	94	.0316	.054	70.73	69.79	.916	.916	-1.498	24.662	20.135	1142.641	1142.641
95	96	.0316	.055	69.56	69.56	.929	.929	-1.065	25.114	20.440	1238.628	1238.628
97	98	.0316	.056	69.25	69.73	.939	.939	-0.709	25.470	20.853	1334.086	1334.086
99	100	.0316	.057	68.95	68.95	.983	.966	-0.337	25.742	21.254	1430.237	1430.237
101	102	.0316	.058	68.72	68.72	.991	.980	-0.237	25.942	21.562	1527.332	1527.332
103	104	.0316	.059	68.59	68.59	.996	.988	-0.105	26.075	21.737	1623.138	1623.138
105	106	.0316	.060	68.51	68.51	.993	.993	-0.037	26.182	21.850	1719.122	1719.122
107	108	.0316	.061	68.42	68.42	.999	.999	-0.117	26.163	21.973	1815.109	1815.109
109	110	.0316	.062	68.39	68.39	.996	.996	-0.165	26.179	22.021	1911.282	1911.282
111	112	.0316	.063	68.38	68.38	1.000	1.001	-0.001	26.178	22.022	2006.158	2006.158
113	114	.0316	.064	68.41	68.41	1.000	1.000	-0.001	26.181	21.994	2102.516	2102.516
115	116	.0316	.065	68.41	68.41	1.000	1.000	-0.001	26.182	21.992	2391.005	2391.005
117	118	.0316	.066	68.44	68.44	1.000	1.000	-0.001	26.183	21.992	2391.005	2391.005
119	120	.0316	.067	68.44	68.44	1.000	1.000	-0.001	26.188	21.992	2391.005	2391.005
121	122	.0316	.068	68.44	68.44	1.000	1.000	-0.001	26.189	21.992	2391.005	2391.005
123	124	.0316	.069	68.44	68.44	1.000	1.000	-0.001	26.190	21.992	2391.005	2391.005
125	126	.0316	.070	68.44	68.44	1.000	1.000	-0.001	26.191	21.992	2391.005	2391.005
127	128	.0316	.071	68.44	68.44	1.000	1.000	-0.001	26.192	21.992	2391.005	2391.005
129	130	.0316	.072	68.44	68.44	1.000	1.000	-0.001	26.193	21.992	2391.005	2391.005
131	132	.0316	.073	68.44	68.44	1.000	1.000	-0.001	26.194	21.992	2391.005	2391.005
133	134	.0316	.074	68.44	68.44	1.000	1.000	-0.001	26.195	21.992	2391.005	2391.005
135	136	.0316	.075	68.44	68.44	1.000	1.000	-0.001	26.196	21.992	2391.005	2391.005
137	138	.0316	.076	68.44	68.44	1.000	1.000	-0.001	26.197	21.992	2391.005	2391.005
139	140	.0316	.077	68.44	68.44	1.000	1.000	-0.001	26.198	21.992	2391.005	2391.005
141	142	.0316	.078	68.44	68.44	1.000	1.000	-0.001	26.199	21.992	2391.005	2391.005
143	144	.0316	.079	68.44	68.44	1.000	1.000	-0.001	26.200	21.992	2391.005	2391.005
145	146	.0316	.080	68.44	68.44	1.000	1.000	-0.001	26.201	21.992	2391.005	2391.005
147	148	.0316	.081	68.44	68.44	1.000	1.000	-0.001	26.202	21.992	2391.005	2391.005
149	150	.0316	.082	68.44	68.44	1.000	1.000	-0.001	26.203	21.992	2391.005	2391.005
151	152	.0316	.083	68.44	68.44	1.000	1.000	-0.001	26.204	21.992	2391.005	2391.005
153	154	.0316	.084	68.44	68.44	1.000	1.000	-0.001	26.205	21.992	2391.005	2391.005
155	156	.0316	.085	68.44	68.44	1.000	1.000	-0.001	26.206	21.992	2391.005	2391.005
157	158	.0316	.086	68.44	68.44	1.000	1.000	-0.001	26.207	21.992	2391.005	2391.005
159	160	.0316	.087	68.44	68.44	1.000	1.000	-0.001	26.208	21.992	2391.005	2391.005
161	162	.0316	.088	68.44	68.44	1.000	1.000	-0.001	26.209	21.992	2391.005	2391.005
163	164	.0316	.089	68.44	68.44	1.000	1.000	-0.001	26.210	21.992	2391.005	2391.005
165	166	.0316	.090	68.44	68.44	1.00						

JOB KL002 TAPE 3166R- FILES 01-21, RUNS 5.01-5.21 03/09/79

RUN NO. 5. POINT 21. NO GRID

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	SUPERLAYER FUNCTION FROM WALL TO $y+=35$	STANDARD
FREE STREAM VELOCITY =	99.386	99.386	
FREE STREAM TEMPERATURE =	68.701		
WALL TEMPERATURE =	85.150		
WALL HEAT FLUX =	.05040		
FREE STREAM DENSITY =	.07533		
FREE STREAM KINEMATIC VISCOSITY =	.0001620		
DENSITY OF FLUID AT WALL =	.07306		
KINEMATIC VISCOSITY OF FLUID AT WALL =	.0001710		
WALL/FREE STREAM DENSITY RATIO =	.96981		
LOCATION REYNOLDS NUMBER (REX) =	4300270.75		
INPUT VALUE OF VELOCITY DELTA =	1.16000		
INPUT VALUE OF TEMPERATURE DELTA =	1.20000		
CALCULATED DELTA =		1.12000	
DELTA 99.5% INPUT =	.00000		
DISPLACEMENT THICKNESS (DELSTAR) =	.16717	.16724	
MOMENTUM THICKNESS (THETA) =	.11853	.11873	
ENERGY-DISSIPATION THICKNESS =	.20985	.20997	
ENTHALPY THICKNESS =	.00411	.00412	
SHAPE FACTOR 12 (DELSTAR/THETA) =	1.41039	1.40859	
SHAPE FACTOR 32 (ENEPGY/THETA) =	1.77047	1.76849	
MOMENTUM THICKNESS REYNOLDS NUMBER =	6060.58	6070.91	
DISPLACEMENT THICKNESS REYNOLDS NUMBER =	8547.72	8551.42	
SKIN FRICTION COEFFICIENT =	.002744		
FRICITION VELOCITY =	3.73840		
LAW OF THE WALL CONSTANT (K) =	.41000		
LAW OF THE WALL CONSTANT (C) =	5.00000		
WAKE STRENGTH =		.61452	
CLAUSERS "DELTA" INTGPAL =	-4.16677	-4.33686	
CLAUSERS "G" INTGPAL =	30.84027	30.74177	
DISPLACEMENT THICKNESS - CONSTANT DENSITY =	.15990	.16313	
MOMENTUM THICKNESS - CONSTANT DENSITY =	.11943	.11963	
SHAPE FACTOR 12 - CONSTANT DENSITY =	1.33887	1.36357	
LOCATION -Y- =	84.10001		
Z = CENTERLINE			

Table 16.

JOB KLD02 TAPE 3166R- FILES 01-21, RUNS 5.01-5.21 03/09/79

RUN NO. S. POINT 21. NO GRID

REDUCED PROFILE DATA

N	Y INCHES	Y/ INCHES	U DELTA	T FT/SEC	DEG. F	U/UF	THETA	U-UE	U(+)	T(+)	V(+)
1	.0067	.0067	36.75	70.87	.365	.371	-16.876	9.729	6.573	11.532	
2	.0074	.0074	36.38	70.87	.366	.372	-16.318	10.267	7.421	13.536	
3	.0083	.0083	41.51	70.74	.368	.373	-15.748	10.837	7.950	15.175	
4	.0121	.0121	43.34	70.61	.436	.398	-14.999	11.586	8.510	17.361	
5	.0139	.0139	44.97	70.59	.452	.411	-14.556	12.642	8.798	19.201	
6	.0149	.0149	49.14	70.53	.476	.473	-13.943	13.145	9.259	22.298	
7	.0165	.0165	49.87	70.50	.494	.454	-13.440	13.339	9.706	25.777	
8	.0174	.0174	51.16	70.49	.502	.465	-13.246	13.685	9.947	27.194	
9	.0184	.0184	51.17	70.49	.515	.476	-12.960	13.974	10.221	30.114	
10	.0194	.0194	52.71	70.47	.524	.483	-12.661	14.179	10.641	32.122	
11	.0221	.0221	53.53	70.47	.533	.512	-12.467	14.318	10.769	37.219	
12	.0230	.0230	54.16	70.43	.539	.516	-12.054	14.492	10.954	40.216	
13	.0258	.0258	54.65	70.49	.545	.526	-11.968	14.617	11.080	43.595	
14	.0277	.0277	55.34	70.56	.557	.534	-11.762	14.804	11.429	47.756	
15	.0295	.0295	55.87	70.23	.559	.542	-11.577	14.864	11.605	53.797	
16	.0311	.0311	56.11	70.11	.565	.550	-11.564	15.053	11.764	56.712	
17	.0347	.0347	57.55	70.79	.583	.569	-10.772	15.501	12.173	68.917	
18	.0346	.0346	50.12	70.61	.595	.590	-10.577	15.814	12.414	81.428	
19	.0351	.0351	60.11	70.74	.605	.596	-10.577	16.379	12.755	93.511	
20	.0356	.0356	61.17	70.12	.615	.616	-10.223	16.632	12.961	105.535	
21	.0376	.0376	61.14	70.09	.625	.612	-9.963	16.699	13.360	141.640	
22	.0377	.0377	61.49	70.93	.634	.624	-9.715	16.707	13.463	141.606	
23	.0389	.0389	63.01	70.50	.642	.629	-9.515	17.054	13.667	154.176	
24	.0397	.0397	64.56	70.44	.649	.676	-9.332	17.254	13.814	167.111	
25	.0417	.0417	65.76	70.53	.656	.696	-9.096	17.489	13.963	178.041	
26	.0413	.0413	66.66	70.41	.665	.653	-8.914	17.671	14.126	190.794	
27	.0410	.0410	67.09	70.29	.669	.660	-8.804	17.781	14.245	203.546	
28	.0407	.0407	66.47	70.29	.677	.666	-8.598	17.998	14.335	224.864	
29	.0411	.0411	67.73	70.23	.682	.670	-8.464	18.121	14.576	226.864	
30	.0417	.0417	67.74	70.13	.689	.672	-8.277	18.315	14.647	239.617	
31	.0415	.0415	68.81	70.00	.692	.685	-8.178	18.457	14.784	271.316	
32	.0416	.0416	70.89	70.78	.705	.691	-7.837	18.748	15.042	302.650	
33	.0414	.0414	71.09	70.53	.715	.703	-7.568	19.017	15.350	333.984	
34	.0413	.0413	71.12	70.35	.726	.718	-7.253	19.020	15.350	367.869	
35	.0413	.0413	71.12	70.35	.737	.728	-6.986	19.599	15.593	398.293	
36	.0419	.0419	72.27	70.17	.745	.734	-6.791	19.704	15.705	431.449	
37	.0416	.0416	72.74	70.13	.756	.743	-6.491	20.095	15.889	461.508	
38	.0415	.0415	72.84	70.00	.766	.754	-6.228	20.357	16.136	494.664	
39	.0415	.0415	73.89	70.78	.771	.760	-6.093	20.492	16.252	525.634	
40	.0415	.0415	73.99	70.53	.781	.768	-5.923	20.762	16.439	525.634	
41	.0425	.0425	77.61	70.51	.781	.776	-5.646	20.919	16.607	558.062	
42	.0423	.0423	77.62	70.38	.786	.768	-5.000	21.055	17.069	652.429	
43	.0401	.0401	78.69	70.23	.812	.817	-4.522	22.633	17.910	746.068	
44	.0405	.0405	62.49	70.23	.830	.837	-4.052	23.144	18.306	841.164	
45	.0417	.0417	94.61	71.71	.651	.556	-3.441	23.617	18.698	936.260	
46	.0513	.0513	86.61	71.35	.771	.771	-2.468	24.228	18.977	1030.081	
47	.0564	.0564	88.79	70.77	.888	.74	-2.557	24.528	19.320	1125.750	
48	.0617	.0617	89.83	70.56	.904	.747	-2.557	24.527	19.320	1218.998	
49	.0669	.0669	91.52	72.29	.922	.923	-2.78	24.527	19.660	1313.730	
50	.0721	.0721	92.94	70.35	.935	.919	-1.73	24.862	19.898	1417.733	
51	.0727	.0727	94.33	69.85	.949	.930	-1.352	25.233	19.998	1502.465	
52	.0824	.0824	95.54	69.62	.961	.944	-1.329	25.556	20.194		
53	.0873	.0873	96.65	69.48	.973	.953	-1.731	25.855	20.382	1596.468	
54	.0926	.0926	97.47	69.31	.981	.967	-1.514	26.070	20.684	1691.207	
55	.0985	.0985	98.21	69.15	.988	.966	-1.315	26.270	20.874	1786.206	
56	1.0022	1.0022	98.76	69.04	.993	.986	-1.162	26.470	21.086	1886.481	
57	1.01836	1.01836	99.07	68.95	.997	.990	-1.085	26.670	21.263	2068.852	
58	1.01356	1.01356	99.29	68.80	.994	.994	-1.025	26.870	21.351	2163.766	
59	1.01277	1.01277	99.37	68.73	1.000	1.001	-1.003	26.982	21.478	2256.867	
60	1.01299	1.01299	99.42	68.69	1.000	1.000	-1.003	26.996	21.580	2356.501	
61	1.012913	1.012913	99.42	68.71	1.000	1.000	-1.004	26.599	21.692	2447.415	
62	1.013434	1.013434	99.43	68.72	1.000	1.000	-1.004	26.611	21.744	2554.782	
63	1.013952	1.013952	99.45	68.74	1.000	1.000	-1.004	26.593	21.844	2635.421	
64	1.014466	1.014466	99.48	68.73	1.000	1.000	-1.004	26.593	21.956	2733.153	
65	1.014966	1.014966	99.42	68.78	1.000	1.000	-1.004	26.593	21.956	2825.067	
66	1.01557	1.01557	99.50	68.75	1.000	1.000	-1.004	26.599	21.925	2920.163	
67	1.016029	1.016029	99.44	68.75	1.000	1.000	-1.004	26.599	21.925	3013.984	
68	1.016544	1.016544	99.43	68.78	1.000	1.000	-1.004	26.593	21.922	3108.716	
69	1.017064	1.017064	99.41	68.78	1.000	1.000	-1.004	26.596	21.921	3101.540	
70	2.01394	2.01394	99.43	68.73	1.000	1.000	-1.004	26.596	21.921	3897.540	
71	2.01726	2.01726	99.40	68.62	1.000	1.000	-1.004	26.604	21.233	4686.729	
72	3.0063	2.0064	99.70	68.59	1.000	1.000	-1.004	26.562	21.145	5076.29	

Table 16.

JOB KLD48 TAPE 3166R- FILES 117-137, RUNS 8.01-8.21 04/05/79

RUN NO. 8. POINT 3. GRID NO. 1

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION	STANDARD SUBLAYER FUNCTION FROM TO WALL	STANDARD FUNCTION FROM WALL TO $Y^+=35$
FREE STREAM VELOCITY =	98.579		98.579
FREE STREAM TEMPERATURE =	69.040		
WALL TEMPERATURE =	88.500		
WALL HEAT FLUX =	.07848		
FREE STREAM DENSITY =	.07656		
FREE STREAM KINEMATIC VISCOSITY =	.0001594		
DENSITY OF FLUID AT WALL =	.07385		
KINEMATIC VISCOSITY OF FLUID AT WALL =	.0001700		
WALL/FREE STREAM DENSITY RATIO =	.96450		
LOCATION REYNOLDS NUMBER (REX) =	1042257.25		
INPUT VALUE OF VELOCITY DELTA =	.38000		
INPUT VALUE OF TEMPERATURE DELTA =	.38000		
CALCULATED DELTA =			.28346
DELTA 99.5% INPUT =	.00000		
DISPLACEMENT THICKNESS (DELSTAR) =	.03973		.03962
MOMENTUM THICKNESS (THETA) =	.02650		.02688
ENERGY-DISSIPATION THICKNESS =	.04728		.04765
ENTHALPY THICKNESS =	.00144		.00145
SHAPE FACTOR 12 (DELSTAR/THETA) =	1.49920		1.47388
SHAPE FACTOR 32 (ENERGY/THETA) =	1.78418		1.77255
MOMENTUM THICKNESS REYNOLDS NUMBER =	1365.21		1385.10
DISPLACEMENT THICKNESS REYNOLDS NUMBER =	2046.73		2041.47
SKIN FRICTION COEFFICIENT =	.004092		
FRICTION VELOCITY =	4.54052		
LAW OF THE WALL CONSTANT (K) =	.41000		
LAW OF THE WALL CONSTANT (C) =	5.00000		
WAKE STRENGTH =			.20209
CLAUSERS 'DELTA' INTEGRAL =	-.69385		-.82885
CLAUSERS 'G' INTEGRAL =	5.42495		5.18405
DISPLACEMENT THICKNESS - CONSTANT DENSITY =	.03512		.03818
MOMENTUM THICKNESS - CONSTANT DENSITY =	.02678		.02718
SHAPE FACTOR 12 - CONSTANT DENSITY =	1.31159		1.40465

LOCATION -X- 20.23000

Z = CENTERLINE

Table 17.

JOB KLD46 TAPE 3166R- FILES 117-137, RUNS 8.01-8.21 04/05/79

RUN NO. 8. POINT 3. GRID NO. 1

REDUCED PROFILE DATA

N	Y INCHES	Y/ FT/SEC	U DEG.F	T	U/UE	THETA	UTAU	U(+)	T(+)	Y(+)
1	.0063	.022	48.11	80.88	.488	.392	-11.115	10.596	7.613	14.091
2	.0078	.028	52.24	80.13	.530	.430	-10.205	11.506	8.579	17.430
3	.0087	.031	54.96	79.72	.558	.451	-9.606	12.104	9.003	19.433
4	.0097	.034	56.72	79.29	.575	.473	-9.218	12.493	9.448	21.659
5	.0107	.038	58.28	78.96	.591	.490	-8.875	12.836	9.781	23.885
6	.0121	.043	60.36	78.66	.612	.506	-8.418	13.293	10.093	27.001
7	.0135	.048	61.40	78.39	.623	.520	-8.187	13.523	10.367	30.118
8	.0143	.051	62.00	78.25	.629	.527	-8.055	13.656	10.512	31.899
9	.0165	.058	63.52	77.87	.644	.546	-7.721	13.990	10.900	36.796
10	.0187	.066	64.71	77.43	.656	.569	-7.459	14.252	11.349	41.693
11	.0207	.073	65.52	77.27	.665	.577	-7.260	14.431	11.512	46.145
12	.0221	.078	66.30	77.11	.673	.585	-7.108	14.603	11.674	49.261
13	.0236	.083	66.66	76.93	.676	.595	-7.025	14.686	11.668	52.600
14	.0257	.091	67.26	76.73	.682	.605	-6.894	14.817	12.066	57.275
15	.0273	.096	67.99	76.64	.690	.610	-6.736	14.974	12.163	60.837
16	.0295	.104	68.50	76.59	.695	.612	-6.625	15.086	12.213	65.734
17	.0311	.110	69.15	76.51	.701	.616	-6.562	15.228	12.291	69.295
18	.0375	.132	70.75	76.10	.718	.637	-6.129	15.581	12.718	83.542
19	.0445	.157	72.63	75.63	.737	.661	-5.715	15.996	13.695	99.124
20	.0515	.182	74.34	75.23	.754	.682	-5.338	16.373	13.608	114.706
21	.0575	.203	75.68	74.95	.768	.696	-5.043	16.668	13.889	128.062
22	.0644	.227	77.19	74.68	.783	.710	-4.710	17.001	14.173	143.421
23	.0716	.253	78.61	74.42	.797	.724	-4.397	17.314	14.437	159.449
24	.0775	.274	79.77	74.15	.809	.737	-4.142	17.569	14.715	172.582
25	.0843	.298	80.99	73.91	.822	.750	-3.874	17.637	14.961	187.719
26	.0917	.324	82.34	73.67	.835	.762	-3.576	18.135	15.210	204.191
27	.0979	.345	83.47	73.40	.847	.776	-3.327	18.383	15.483	217.992
28	.1046	.369	84.53	73.15	.858	.789	-3.093	18.618	15.739	232.907
29	.1117	.394	85.62	72.91	.869	.801	-2.854	18.857	15.988	248.711
30	.1177	.415	86.58	72.67	.878	.813	-2.642	19.069	16.231	262.067
31	.1247	.446	88.53	72.44	.888	.825	-2.433	19.278	16.467	277.649
32	.1314	.464	88.52	72.35	.898	.830	-2.215	19.496	16.558	292.563
33	.1483	.523	90.73	71.74	.920	.861	-1.729	19.982	17.165	310.183
34	.1661	.586	92.67	71.21	.940	.888	-1.302	20.409	17.724	369.806
35	.1837	.648	94.32	70.66	.957	.917	-0.939	20.772	18.288	408.983
36	.2016	.712	95.56	70.42	.970	.929	-0.660	21.051	18.540	449.274
37	.2185	.771	96.50	70.03	.979	.949	-0.458	21.253	18.943	486.448
38	.2368	.826	97.15	69.72	.985	.965	-0.316	21.508	19.258	527.184
39	.2538	.894	97.66	69.50	.991	.977	-0.203	21.508	19.286	564.358
40	.2715	.958	98.05	69.35	.995	.984	-0.117	21.594	19.633	604.426
41	.2885	1.018	98.25	69.24	.997	.989	-0.072	21.639	19.745	642.268
42	.3064	1.081	98.41	69.17	.998	.993	-0.037	21.674	19.817	682.114
43	.3361	1.186	98.50	69.08	1.000	.998	-0.017	21.694	19.916	748.226
44	.3667	1.294	98.59	69.04	1.000	.999	-0.002	21.713	19.951	816.342
45	.3966	1.400	98.59	69.01	1.000	1.001	-0.004	21.714	19.982	883.344
46	.4265	1.515	98.58	69.07	1.000	1.000	-0.000	21.711	19.928	949.457
47	.4564	1.611	98.56	69.04	1.000	1.000	-0.003	21.707	19.953	1016.014
48	.4869	1.718	98.60	69.03	1.000	1.001	-0.006	21.717	19.966	1083.907
49	.5167	1.823	98.62	69.04	1.000	1.000	-0.010	21.721	19.955	1150.242
50	.5465	1.928	98.58	69.05	1.000	1.000	-0.001	21.710	19.940	1216.577
51	.5763	2.033	98.51	69.04	1.000	1.000	-0.015	21.696	19.953	1282.912
52	.6067	2.140	98.47	69.01	1.000	1.001	-0.023	21.688	19.982	1350.582
53	.8245	2.309	98.50	69.03	1.000	1.000	-0.016	21.695	19.963	1835.405
54	1.0425	3.676	98.40	69.04	1.000	1.000	-0.040	21.671	19.951	2320.674
55	1.2607	4.448	98.43	69.06	1.000	1.000	-0.032	21.679	19.934	2806.387
56	1.4765	5.216	98.39	69.05	1.000	1.000	-0.041	21.670	19.945	3291.210
57	1.6971	5.987	98.30	69.07	1.000	1.000	-0.061	21.650	19.922	3777.815
58	1.9153	6.757	98.28	69.07	1.000	1.000	-0.065	21.646	19.922	4263.528
59	2.1333	7.526	98.21	69.08	1.000	1.000	-0.081	21.630	19.917	4748.797
60	2.3514	8.295	98.15	69.07	1.000	1.000	-0.094	21.617	19.923	5234.287
61	2.5695	9.065	98.14	69.07	1.000	1.000	-0.096	21.615	19.922	5719.779
62	2.7861	9.836	98.04	69.10	1.000	1.000	-0.119	21.592	19.888	6206.383
63	3.0065	10.607	98.10	69.10	1.000	1.000	-0.106	21.605	19.894	6692.541

Table 17.

JOB KLD48 TAPE 3166R- FILES 117-137, RUNS 8.01-8.21 04/05/79

RUN NO. 8. POINT 4. GRID NO. 1

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO $Y^+=35$
FREE STREAM VELOCITY =	98.669	98.669
FREE STREAM TEMPERATURE =	69.213	
WALL TEMPERATURE =	88.710	
WALL HEAT FLUX =	.07774	
FREE STREAM DENSITY =	.07654	
FREE STREAM KINEMATIC VISCOSITY =	.0001595	
DENSITY OF FLUID AT WALL =	.07382	
KINEMATIC VISCOSITY OF FLUID AT WALL =	.0001701	
WALL/FREE STREAM DENSITY RATIO =	.96445	
LOCATION REYNOLDS NUMBER (REX) =	1042609.78	
INPUT VALUE OF VELOCITY DELTA =	.38000	
INPUT VALUE OF TEMPERATURE DELTA =	.41000	
CALCULATED DELTA =		.30691
DISPLACEMENT THICKNESS (DELSTAR) =	.00000	.04376
MOMENTUM THICKNESS (THETA) =	.04407	.02969
ENERGY-DISSIPATION THICKNESS =	.02918	.05252
ENTHALPY THICKNESS =	.05197	.00154
SHAPE FACTOR 12 (DELSTAR/THETA) =	1.51034	1.47391
SHAPE FACTOR 32 (ENERGY/THETA) =	1.78130	1.76873
MOMENTUM THICKNESS REYNOLDS NUMBER =	1503.68	1530.32
DISPLACEMENT THICKNESS REYNOLDS NUMBER =	2271.08	2255.55
SKIN FRICTION COEFFICIENT =	.003946	
FRICTION VELOCITY =	4.46288	
LAW OF THE WALL CONSTANT (K) =	.41000	
LAW OF THE WALL CONSTANT (C) =	5.00000	
WAKE STRENGTH =		.25291
CLAUSERS 'DELTA' INTEGRAL =	-7.77189	-.93355
CLAUSERS 'G' INTEGRAL =	6.38686	5.97025
DISPLACEMENT THICKNESS - CONSTANT DENSITY =	.03873	.04223
MOMENTUM THICKNESS - CONSTANT DENSITY =	.02948	.03001
SHAPE FACTOR 12 - CONSTANT DENSITY =	1.31385	1.40698

LOCATION -X- 20.23000
Z = +6 INCHES

Table 18.

JOB KLD48 TAPE 3166R- FILES 117-137, RUNS 8.01-8.21 04/05/79
 RUN NO. 8. POINT 4. GRID NO. 1

REDUCED PROFILE DATA

N	INCHES	Y/	U	T	U-UE	U(+)	T(+)	Y(+)
		DELTA	FT/SEC	DEG.F	U/UE	THETA	UTAU	
1	.0076	.025	50.76	80.54	.514	.419	-10.734	11.375
2	.0090	.029	53.58	79.90	.543	.452	-10.162	12.007
3	.0298	.032	55.24	79.60	.560	.467	-9.732	12.377
4	.0107	.035	56.59	79.31	.574	.482	-9.428	12.681
5	.0119	.039	57.99	78.93	.588	.503	-9.115	13.374
6	.0135	.044	59.69	78.58	.605	.520	-8.734	13.583
7	.0148	.048	60.62	78.30	.614	.534	-8.376	13.733
8	.0157	.051	61.29	78.12	.621	.543	-8.077	14.031
9	.0178	.056	62.62	77.85	.635	.572	-7.885	14.224
10	.0198	.065	63.46	77.56	.643	.581	-7.684	14.425
11	.0216	.070	64.38	77.38	.652	.589	-7.513	14.596
12	.0234	.076	65.14	77.22	.660	.597	-7.415	14.694
13	.0248	.081	65.56	77.06	.665	.607	-7.238	14.871
14	.0266	.087	66.37	76.87	.673	.613	-7.093	15.015
15	.0287	.094	67.01	76.77	.679	.619	-6.957	15.152
16	.0307	.100	67.62	76.65	.685	.625	-6.846	15.263
17	.0325	.106	68.12	76.53	.690	.646	-6.429	15.680
18	.0391	.127	69.98	76.11	.709	.665	-6.068	16.041
19	.0457	.149	71.59	75.74	.726	.684	-5.685	16.424
20	.0526	.171	73.30	75.37	.743	.697	-5.417	16.692
21	.0587	.191	74.49	75.12	.755	.710	-5.092	17.017
22	.0657	.214	75.94	74.87	.770	.723	-4.802	17.307
23	.0727	.237	77.24	74.61	.783	.735	-4.547	17.562
24	.0787	.257	78.36	74.38	.794	.748	-4.257	17.852
25	.0860	.280	79.67	74.12	.807	.760	-4.034	18.075
26	.0927	.302	80.67	73.89	.818	.769	-3.787	18.322
27	.0989	.322	81.77	73.72	.829	.779	-3.527	18.582
28	.1062	.346	82.93	73.53	.840	.793	-3.318	18.791
29	.1127	.367	83.86	73.26	.850	.804	-3.078	19.031
30	.1187	.387	84.93	73.03	.861	.815	-2.877	19.232
31	.1260	.411	85.83	72.81	.870	.825	-2.689	19.420
32	.1329	.433	86.67	72.62	.878	.848	-2.142	19.967
33	.1499	.489	89.11	72.18	.903	.871	-1.694	20.415
34	.1675	.546	91.11	71.73	.923	.893	-1.278	20.831
35	.1847	.602	92.97	71.30	.942	.916	-0.952	21.157
36	.2027	.661	94.42	70.84	.957	.932	-0.690	21.419
37	.2198	.716	95.59	70.54	.969	.950	-0.463	21.646
38	.2377	.775	96.61	70.20	.979	.964	-0.307	21.802
39	.2549	.631	97.30	69.91	.986	.974	-0.207	21.902
40	.2727	.889	97.75	69.72	.991	.981	-0.109	22.000
41	.2897	.944	98.18	69.59	.995	.986	-0.055	22.053
42	.3077	1.003	98.52	69.49	.997	.993	-0.019	22.090
43	.3375	1.100	98.58	69.35	.999	.997	-0.008	22.101
44	.3676	1.198	98.63	69.28	1.000	.999	-0.004	22.105
45	.3977	1.296	98.65	69.24	1.000	1.000	-0.005	22.114
46	.4277	1.394	98.69	69.21	1.000	1.001	-0.001	22.108
47	.4577	1.491	98.66	69.20	1.000	1.000	-0.003	22.112
48	.4877	1.589	98.68	69.22	1.000	1.000	-0.003	22.116
49	.5178	1.687	98.71	69.24	1.000	1.000	-0.003	22.109
50	.5478	1.785	98.67	69.25	1.000	1.000	-0.003	22.112
51	.5778	1.883	98.68	69.24	1.000	1.000	-0.003	22.109
52	.6079	1.981	98.63	69.25	1.000	1.000	-0.003	22.109
53	.6325	2.690	98.68	69.23	1.000	1.000	-0.003	22.101
54	1.06438	3.401	98.72	69.23	1.000	1.000	-0.003	22.112
55	1.02618	4.111	98.72	69.18	1.000	1.000	-0.003	22.121
56	1.04796	4.621	98.70	69.18	1.000	1.000	-0.004	22.119
57	1.06984	5.534	98.75	69.14	1.000	1.000	-0.004	22.127
58	1.09166	6.245	98.65	69.13	1.000	1.000	-0.004	22.105
59	2.01346	6.955	98.69	69.13	1.000	1.000	-0.004	22.113
60	2.03530	7.667	98.57	69.10	1.000	1.000	-0.004	22.087
61	2.05709	8.377	98.55	69.13	1.000	1.000	-0.004	22.082
62	2.07895	9.089	98.55	69.08	1.000	1.000	-0.007	22.083
63	3.00808	9.601	98.46	69.04	1.000	1.000	-0.046	22.062
					1.000	1.000	20.009	6576.936

Table 18.

JOB KLD48 TAPE 3166R- FILES 117-137, RUNS 8.01-8.21 04/05/79

RUN NO. 8. POINT 5. GRID NO. 1

BOUNDARY LAYER PROPERTIES

LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO Y+=35
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FREE STREAM VELOCITY =	98.803
FREE STREAM TEMPERATURE =	69.372
WALL TEMPERATURE =	88.840
WALL HEAT FLUX =	.07878
FREE STREAM DENSITY =	.07652
FREE STREAM KINEMATIC VISCOSITY =	.0001596
DENSITY OF FLUID AT WALL =	.07380
KINEMATIC VISCOSITY OF FLUID AT WALL =	.0001702
WALL/FREE STREAM DENSITY RATIO =	.96451
LOCATION REYNOLDS NUMBER (REX) =	1043460.77
INPUT VALUE OF VELOCITY DELTA =	.38000
INPUT VALUE OF TEMPERATURE DELTA =	.38000
CALCULATED DELTA =	.28313
DELTA 99.5% INPUT =	.00000
DISPLACEMENT THICKNESS (DELSTAR) =	.03925
MOMENTUM THICKNESS (THETA) =	.02617
ENERGY-DISSIPATION THICKNESS =	.04673
ENTHALPY THICKNESS =	.00145
SHAPE FACTOR 12 (DELSTAR/THETA) =	1.49998
SHAPE FACTOR 32 (ENERGY/THETA) =	1.78570
MOMENTUM THICKNESS REYNOLDS NUMBER =	1349.79
DISPLACEMENT THICKNESS REYNOLDS NUMBER =	2024.65
SKIN FRICTION COEFFICIENT =	.004123
FRICTION VELOCITY =	4.56772
LAW OF THE WALL CONSTANT (K) =	.41000
LAW OF THE WALL CONSTANT (C) =	5.00000
WAKE STRENGTH =	.18378
CLAUSERS 'DELTA' INTEGRAL =	-.68077
CLAUSERS 'G' INTEGRAL =	5.31071
DISPLACEMENT THICKNESS - CONSTANT DENSITY =	.03464
MOMENTUM THICKNESS - CONSTANT DENSITY =	.02645
SHAPE FACTOR 12 - CONSTANT DENSITY =	1.30945

LOCATION -X- 20.23000

Z = -6 INCHES

Table 19.

JOB KLD48 TAPE 3166R- FILES 117-137, RUNS 8.01-8.21 04/05/79

RUN NO. 8. POINT 5. GRID NO. 1

REDUCED PROFILE DATA

N	INCHES	Y	Y/ INCHES	U	T	U/UE	THETA	UTAU	U(+)	T(+)	Y(+)
1	.0063	.C22	48.52	81.35	.491	.385	-11.009	10.622	7.689	14.159	
2	.0073	.C26	51.73	80.97	.524	.404	-10.305	11.326	8.078	16.396	
3	.0084	.C30	54.69	80.37	.554	.435	-9.656	11.973	8.701	18.857	
4	.0093	.C33	56.67	80.03	.574	.452	-9.223	12.407	9.043	20.870	
5	.0104	.C37	58.20	79.78	.589	.466	-8.889	12.742	9.308	23.331	
6	.0121	.C43	60.25	79.27	.610	.492	-8.441	13.190	9.829	27.133	
7	.0139	.C49	61.73	78.96	.625	.507	-8.117	13.514	10.146	31.160	
8	.0146	.C52	62.39	78.78	.631	.517	-7.971	13.659	10.327	32.726	
9	.0166	.C59	63.48	78.43	.642	.535	-7.733	13.897	10.690	37.199	
10	.0186	.C66	64.53	78.14	.653	.549	-7.504	14.127	10.983	41.673	
11	.0209	.C74	65.49	77.88	.663	.563	-7.293	14.338	11.258	46.818	
12	.0222	.C79	66.17	77.71	.670	.571	-7.144	14.487	11.425	49.726	
13	.0236	.C83	66.83	77.62	.676	.577	-7.000	14.630	11.527	52.858	
14	.0260	.C92	67.56	77.48	.684	.584	-6.839	14.791	11.668	58.226	
15	.0277	.C98	68.14	77.26	.690	.595	-6.712	14.918	11.889	62.029	
16	.0294	.104	68.68	77.08	.695	.604	-6.594	15.037	12.072	65.832	
17	.0312	.110	69.24	76.95	.701	.611	-6.472	15.158	12.214	69.858	
18	.0374	.132	71.07	76.57	.719	.630	-6.071	15.560	12.598	83.727	
19	.0444	.157	72.59	76.15	.739	.652	-5.651	15.979	13.028	99.385	
20	.0516	.182	74.45	75.75	.758	.673	-5.244	16.387	13.446	115.490	
21	.0576	.204	76.16	75.41	.771	.690	-4.957	16.674	13.787	128.912	
22	.0644	.228	77.56	75.11	.785	.705	-4.646	16.985	14.105	144.123	
23	.0716	.253	79.19	74.81	.801	.721	-4.294	17.336	14.408	160.228	
24	.0774	.273	80.29	74.51	.813	.736	-4.053	17.577	14.720	173.202	
25	.0844	.298	81.75	74.21	.827	.751	-3.733	17.897	15.022	188.860	
26	.0915	.323	82.94	74.06	.839	.759	-3.473	18.158	15.176	204.742	
27	.0975	.344	83.90	73.85	.849	.770	-3.262	18.369	15.398	218.164	
28	.1043	.366	85.12	73.50	.861	.788	-2.997	18.634	15.756	233.374	
29	.1114	.394	86.32	73.28	.874	.799	-2.733	18.897	15.981	249.256	
30	.1176	.415	87.16	73.12	.882	.808	-2.550	19.081	16.147	263.125	
31	.1244	.439	88.26	72.81	.893	.824	-2.308	19.323	16.467	278.336	
32	.1314	.464	89.16	72.48	.902	.840	-2.111	19.520	16.802	293.994	
33	.1485	.525	91.25	71.99	.924	.865	-1.653	19.978	17.302	332.245	
34	.1662	.587	93.19	71.47	.943	.892	-1.229	20.402	17.842	371.838	
35	.1836	.649	94.62	71.07	.958	.913	-0.917	20.714	18.252	410.759	
36	.2014	.711	95.79	70.70	.970	.932	-0.656	20.972	18.632	450.576	
37	.2186	.772	96.75	70.38	.979	.948	-0.450	21.181	18.959	489.050	
38	.2363	.835	97.31	70.03	.985	.966	-0.326	21.304	19.321	528.643	
39	.2533	.895	97.89	69.75	.991	.981	-0.200	21.431	19.608	566.670	
40	.2714	.959	98.27	69.64	.995	.986	-0.117	21.513	19.713	607.158	
41	.2864	1.019	98.40	69.56	.996	.990	-0.088	21.543	19.800	645.185	
42	.3067	1.083	98.58	69.52	.998	.992	-0.049	21.581	19.839	686.120	
43	.3362	1.188	98.68	69.44	.999	.996	-0.026	21.605	19.921	752.108	
44	.3666	1.295	98.75	69.37	.999	1.000	-0.012	21.618	19.993	820.110	
45	.3964	1.400	98.79	69.38	1.000	1.000	-0.002	21.629	19.986	886.769	
46	.4267	1.507	98.83	69.37	1.000	1.000	-0.005	21.636	19.998	954.546	
47	.4567	1.613	98.79	69.37	1.000	1.000	-0.003	21.627	19.994	1021.653	
48	.4866	1.719	98.70	69.40	0.999	0.999	-0.021	21.609	19.968	1088.536	
49	.5164	1.824	98.76	69.38	1.000	0.999	-0.009	21.622	19.982	1155.195	
50	.5465	1.930	98.83	69.37	1.000	1.000	-0.005	21.636	19.995	1222.525	
51	.5769	2.038	98.78	69.39	1.000	0.999	-0.005	21.625	19.974	1290.527	
52	.6067	2.143	98.74	69.38	1.000	0.999	-0.014	21.616	19.986	1357.186	
53	.8244	2.912	98.80	69.41	1.000	0.998	-0.001	21.630	19.951	1844.156	
54	.0424	3.682	98.81	69.40	1.000	0.999	-0.001	21.632	19.969	2331.797	
55	.2607	4.453	98.72	69.38	0.999	0.999	-0.016	21.613	19.980	2820.110	
56	.4763	5.221	98.78	69.39	1.000	0.999	-0.006	21.625	19.974	3306.856	
57	.6972	5.995	98.76	69.43	1.000	0.997	-0.009	21.621	19.933	3796.510	
58	.9154	6.765	98.64	69.49	0.998	0.994	-0.036	21.594	19.871	4284.599	
59	.21334	7.535	98.62	69.43	0.998	0.997	-0.040	21.590	19.934	4772.240	
60	.23515	8.305	98.56	69.44	0.998	0.996	-0.053	21.578	19.922	5260.105	
61	.25696	9.076	98.43	69.44	0.996	0.996	-0.082	21.549	19.922	5747.970	
62	.27682	9.848	98.36	69.45	0.996	0.996	-0.096	21.535	19.917	6236.953	
63	3.0066	10.619	98.35	69.40	0.995	0.999	-0.099	21.531	19.969	6725.489	

Table 19.

JOB KLD48 TAPE 3166R- FILES 117-137, RUNS 8.01-8.21 04/05/79

RUN NO. 8. POINT 7. GRID NO. 1

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	SUBLAYER FUNCTION FROM WALL TO $Y^+=35$	STANDARD
FREE STREAM VELOCITY	= 98.850	98.850	
FREE STREAM TEMPERATURE	= 69.539		
WALL TEMPERATURE	= 90.360		
WALL HEAT FLUX	= .07816		
FREE STREAM DENSITY	= .07649		
FREE STREAM KINEMATIC VISCOSITY	= .0001597		
DENSITY OF FLUID AT WALL	= .07360		
KINEMATIC VISCOSITY OF FLUID AT WALL	= .0001710		
WALL/FREE STREAM DENSITY RATIO	= .96215		
LOCATION REYNOLDS NUMBER (REX)	= 1457019.69		
INPUT VALUE OF VELOCITY DELTA	= .50000		
INPUT VALUE OF TEMPERATURE DELTA	= .50000		
CALCULATED DELTA		.43856	
DELTA 99.5% INPUT	= .00000		
DISPLACEMENT THICKNESS (DELSTAR)	= .06620	.06600	
MOMENTUM THICKNESS (THETA)	= .04476	.04521	
ENERGY-DISSIPATION THICKNESS	= .07934	.07979	
ENTHALPY THICKNESS	= .00209	.00211	
SHAPE FACTOR 12 (DELSTAR/THETA)	= 1.47895	1.45970	
SHAPE FACTOR 32 (ENERGY/THETA)	= 1.77261	1.76468	
MOMENTUM THICKNESS REYNOLDS NUMBER	= 2308.60	2331.95	
DISPLACEMENT THICKNESS REYNOLDS NUMBER	= 3414.30	3403.94	
SKIN FRICTION COEFFICIENT	= .003434		
FRICTION VELOCITY	= 4.17588		
LAW OF THE WALL CONSTANT (K)	= .41000		
LAW OF THE WALL CONSTANT (C)	= 5.00000		
WAKE STRENGTH		.43069	
CLAUSERS 'DELTA' INTEGRAL	= -1.33449	-1.51240	
CLAUSEPS 'G' INTEGRAL	= 10.58810	10.20506	
DISPLACEMENT THICKNESS - CONSTANT DENSITY	= .06024	.06389	
MOMENTUM THICKNESS - CONSTANT DENSITY	= .04521	.04568	
SHAPE FACTOR 12 - CONSTANT DENSITY	= 1.33246	1.39870	
LOCATION -X-	28.25000		
Z = +6 INCHES			

Table 20.

JOB KLD46 TAPE 3166R- FILES 117-137, RUNS 8.01-8.21 04/05/79

RUN NO. 8. POINT 7. GRID NO. 1

REDUCED PROFILE DATA

N	Y/ INCHES	Y/ DELTA	U/ FT/SEC	T/ DEG F	U/UE	THETA	UTAU	U(+)	T(+)	Y(+)
1	.0077	.C18	46.46	81.60	.470	.421	-12.546	11.125	8.267	15.731
2	.0093	.C21	49.83	80.84	.504	.457	-11.738	11.934	8.982	18.967
3	.0101	.C23	51.42	80.55	.520	.471	-11.358	12.313	9.258	20.615
4	.0107	.C24	52.46	80.38	.531	.480	-10.105	12.567	9.422	21.836
5	.0119	.C27	53.85	80.09	.545	.493	-10.776	12.896	9.690	24.278
6	.0135	.C31	55.66	79.72	.563	.511	-10.344	13.590	10.042	27.534
7	.0159	.C35	56.75	79.37	.574	.528	-10.062	13.678	10.373	31.197
8	.0179	.C36	57.12	79.26	.578	.533	-9.993	13.983	10.473	32.418
9	.0199	.C41	58.39	78.86	.591	.552	-9.688	13.983	10.850	36.488
10	.0200	.C46	59.50	78.60	.602	.565	-9.424	14.248	11.100	40.762
11	.02221	.C50	60.40	78.40	.611	.574	-9.208	14.463	11.284	45.036
12	.0236	.C54	61.01	78.23	.617	.583	-9.061	14.611	11.446	48.088
13	.0249	.C57	61.39	78.08	.621	.590	-8.971	14.701	11.586	50.733
14	.0261	.C61	62.01	77.86	.627	.599	-8.822	14.850	11.774	54.803
15	.0291	.C66	62.64	77.70	.634	.608	-8.671	15.001	11.949	59.280
16	.0311	.C71	63.18	77.56	.639	.615	-8.542	15.130	12.082	63.350
17	.0325	.C74	63.63	77.48	.644	.619	-8.434	15.238	12.157	66.199
18	.0393	.C90	65.30	77.16	.661	.634	-8.035	15.637	12.810	80.038
19	.0457	.C104	66.74	76.79	.675	.652	-7.690	15.982	13.205	93.062
20	.0527	.C120	68.21	76.37	.690	.672	-7.336	16.335	13.413	107.307
21	.0588	.C134	69.27	76.15	.701	.683	-7.064	16.588	13.596	119.721
22	.0661	.C151	70.57	75.95	.714	.692	-6.771	16.900	13.889	134.576
23	.0730	.C167	71.64	75.64	.725	.707	-6.515	17.157	14.036	146.618
24	.0791	.C180	72.49	75.49	.733	.714	-6.313	17.358	14.242	161.032
25	.0863	.C197	73.56	75.27	.744	.726	-6.055	17.616	14.423	175.684
26	.0931	.C212	74.61	75.08	.755	.734	-5.805	17.867	14.640	189.522
27	.0989	.C226	75.37	74.85	.762	.745	-5.624	18.048	14.884	201.325
28	.1060	.C242	76.46	74.80	.773	.747	-5.362	18.310	14.871	215.774
29	.1128	.C257	77.26	74.60	.782	.757	-5.169	18.502	14.989	229.612
30	.1190	.C271	78.01	74.48	.789	.763	-4.989	18.682	15.143	242.230
31	.1256	.C287	78.86	74.31	.796	.771	-4.787	18.885	15.292	256.068
32	.1327	.C303	79.66	74.16	.806	.778	-4.595	19.077	15.632	270.109
33	.14499	.C342	81.71	73.80	.827	.796	-4.105	19.567	15.997	305.112
34	.1675	.C382	83.54	73.41	.845	.814	-3.666	20.006	16.376	340.928
35	.1847	.C421	85.26	73.01	.863	.833	-3.254	20.418	16.700	375.931
36	.2033	.C464	87.07	72.66	.881	.850	-2.821	20.850	16.956	413.782
37	.2199	.C501	88.40	72.39	.894	.863	-2.503	21.168	17.341	447.564
38	.2379	.C543	89.96	71.98	.910	.883	-2.130	21.542	17.660	484.194
39	.2547	.C581	91.23	71.65	.923	.899	-1.824	22.177	17.857	518.383
40	.2729	.C622	92.61	71.44	.937	.909	-1.494	22.430	18.100	555.420
41	.2902	.C662	93.67	71.18	.948	.921	-1.241	22.670	18.380	590.626
42	.3061	.C703	94.67	70.88	.958	.935	-1.002	23.011	18.753	627.054
43	.3376	.C770	96.09	70.49	.972	.954	-0.661	23.286	19.055	687.087
44	.3676	.C839	97.24	70.17	.984	.970	-0.365	23.484	19.299	748.748
45	.3979	.C907	98.07	69.91	.992	.982	-0.168	23.577	19.416	809.799
46	.4279	.C976	98.45	69.79	.996	.988	-0.095	23.625	19.577	870.850
47	.4578	1.044	98.66	69.62	.998	.996	-0.047	23.660	19.624	931.697
48	.4883	1.113	98.80	69.57	1.000	.999	-0.012	23.681	19.650	1054.003
49	.5179	1.181	98.89	69.56	1.000	1.000	-0.009	23.666	19.656	1114.646
50	.5477	1.249	98.83	69.54	1.000	1.000	-0.004	23.667	19.680	1236.748
51	.5780	1.318	98.83	69.52	1.000	1.000	-0.005	23.681	19.680	1276.508
52	.6077	1.386	98.89	69.51	1.000	1.002	-0.009	23.681	19.680	1680.588
53	.8258	1.683	98.82	69.51	1.000	1.000	-0.005	23.665	19.582	2125.242
54	1.0443	2.381	98.88	69.58	1.000	1.000	-0.006	23.678	19.610	2568.471
55	1.2621	2.878	98.84	69.54	1.000	1.000	-0.002	23.669	19.647	3011.701
56	1.4759	3.375	98.93	69.53	1.000	1.001	-0.016	23.690	19.660	3456.558
57	1.6985	3.873	98.89	69.50	1.000	1.000	-0.009	23.680	19.653	3900.601
58	1.9167	4.370	98.90	69.53	1.000	1.000	-0.012	23.683	19.684	4344.441
59	2.1348	4.866	98.87	69.50	1.000	1.002	-0.004	23.676	19.680	4787.874
60	2.3527	5.365	98.80	69.49	1.000	1.003	-0.012	23.660	19.699	5231.917
61	2.5709	5.862	98.77	69.48	1.000	1.003	-0.019	23.653	19.704	5676.775
62	2.7895	6.361	98.70	69.47	1.000	1.003	-0.036	23.636	19.710	6121.428
63	3.0080	6.859	98.67	69.46	1.000	1.004	-0.044	23.627	19.721	

Table 20.

JOB KLD48 TAPE 3166R- FILES 117-137, RUNS 8.01-8.21 04/05/79

RUN NO. 8. POINT 9. GRID NO. 1

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION	STANDARD SUBLAYER FUNCTION FROM TO WALL	WALL TO Y+=35
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FREE STREAM VELOCITY =	98.791	98.791
FREE STREAM TEMPERATURE =	69.330	
WALL TEMPERATURE =	91.450	
WALL HEAT FLUX =	.07785	
FREE STREAM DENSITY =	.07652	
FREE STREAM KINEMATIC VISCOSITY =	.0001596	
DENSITY OF FLUID AT WALL =	.07345	
KINEMATIC VISCOSITY OF FLUID AT WALL =	.0001716	
WALL/FREE STREAM DENSITY RATIO =	.95986	
LOCATION REYNOLDS NUMBER (REX) =	1867237.73	
INPUT VALUE OF VELOCITY DELTA =	.60000	
INPUT VALUE OF TEMPERATURE DELTA =	.69000	
CALCULATED DELTA =		.52824
DISPLACEMENT THICKNESS (DELSTAR) =	.00000	
MOMENTUM THICKNESS (THETA) =	.07941	.07936
ENERGY-DISSIPATION THICKNESS =	.05419	.05452
ENTHALPY THICKNESS =	.09599	.09627
SHAPE FACTOR 12 (DELSTAR/THETA) =	.00274	.00275
SHAPE FACTOR 32 (ENERGY/THETA) =	1.46538	1.45582
MOMENTUM THICKNESS REYNOLDS NUMBER =	1.77135	1.76588
DISPLACEMENT THICKNESS REYNOLDS NUMBER =	2795.22	2611.98
SKIN FRICTION COEFFICIENT =	4096.05	4093.73
FRICTION VELOCITY =	.003268	
LAW OF THE WALL CONSTANT (K) =	4.07592	
LAW OF THE WALL CONSTANT (C) =	.41000	
WAKE STRENGTH =	5.00000	.46756
CLAUSERS 'DELTA' INTEGRAL =	-1.69290	-1.85714
CLAUSERS 'G' INTEGRAL =	12.86577	12.63537
DISPLACEMENT THICKNESS - CONSTANT DENSITY =	.07326	.07662
MOMENTUM THICKNESS - CONSTANT DENSITY =	.05478	.05511
SHAPE FACTOR 12 - CONSTANT DENSITY =	1.33748	1.39025

LOCATION -X- 36.20000

Z = CENTERLINE

Table 21.

JOB KLD48 TAPE 3166R- FILES 117-137, RUNS 8.01-8.21 04/05/79

RUN NO. 8. POINT 9. GRID NO. 1

REDUCED PROFILE DATA

N	Y INCHES	Y/ DELTA	U FT/SEC	T DEG.F	U/UE	THETA	UTAU	U(+)	T(+)	Y(+)
1	.0068	.013	42.95	83.39	.435	.364	-13.699	10.538	7.440	13.519
2	.0076	.015	44.68	82.80	.452	.391	-13.275	10.963	7.981	15.499
3	.0094	.018	48.37	81.89	.490	.432	-12.372	11.866	8.823	18.666
4	.0099	.019	49.16	81.68	.498	.442	-12.170	12.067	9.020	19.655
5	.0108	.021	50.58	81.34	.512	.457	-11.827	12.410	9.329	21.437
6	.0126	.024	53.05	80.85	.537	.479	-11.223	13.015	9.786	25.000
7	.0142	.027	54.43	80.44	.551	.498	-10.864	13.354	10.163	28.167
8	.0151	.029	55.21	80.20	.559	.509	-10.693	13.545	10.385	29.948
9	.0169	.032	56.32	79.97	.570	.519	-10.419	13.819	10.593	33.511
10	.0192	.036	57.44	79.53	.581	.539	-10.145	14.092	10.999	38.064
11	.02209	.040	58.23	79.42	.589	.544	-9.950	14.287	11.104	41.429
12	.02226	.043	58.88	79.21	.596	.553	-9.791	14.447	11.295	44.794
13	.02242	.046	59.27	78.93	.600	.566	-9.695	14.543	11.553	47.961
14	.02260	.049	60.12	78.84	.609	.570	-9.467	14.751	11.642	51.523
15	.02284	.054	60.67	78.59	.614	.581	-9.354	14.884	11.866	56.274
16	.0302	.057	61.18	78.44	.619	.588	-9.227	15.010	12.008	59.837
17	.0316	.060	61.60	78.34	.624	.593	-9.124	15.113	12.099	62.608
18	.0381	.072	63.36	78.01	.641	.607	-8.694	15.544	12.401	75.474
19	.0448	.085	64.81	77.53	.656	.629	-8.337	15.900	12.843	88.736
20	.05200	.098	66.11	77.12	.669	.648	-8.019	16.219	13.223	102.988
21	.05650	.110	67.37	76.98	.682	.654	-7.710	16.528	13.351	114.864
22	.0721	.123	68.45	76.73	.693	.665	-7.443	16.795	13.583	128.720
23	.0781	.137	69.60	76.44	.705	.678	-7.162	17.076	13.861	142.773
24	.0850	.148	70.49	76.27	.714	.686	-6.943	17.295	14.007	154.650
25	.0918	.161	71.38	76.06	.723	.696	-6.725	17.512	14.205	168.307
26	.0979	.174	72.32	75.78	.732	.709	-6.494	17.744	14.466	181.767
27	.1048	.185	73.18	75.57	.741	.718	-6.284	17.954	14.655	193.841
28	.1118	.212	74.64	75.28	.747	.722	-6.124	18.114	14.742	207.499
29	.1160	.223	75.40	75.07	.756	.731	-5.925	18.312	14.925	221.355
30	.1248	.236	76.15	74.92	.763	.740	-5.738	18.500	15.116	233.627
31	.1320	.250	76.96	74.75	.771	.747	-5.556	18.682	15.255	247.087
32	.1490	.262	78.58	74.45	.779	.755	-5.356	18.882	15.416	261.338
33	.1666	.315	80.45	74.03	.795	.769	-4.960	19.278	15.693	294.988
34	.1840	.348	81.94	73.71	.814	.787	-4.499	19.738	16.073	329.825
35	.2022	.383	83.44	73.35	.829	.802	-4.134	20.103	16.374	364.267
36	.2190	.415	84.85	73.07	.845	.818	-3.767	20.470	16.702	400.291
37	.2370	.449	86.25	72.79	.873	.831	-3.420	20.818	16.960	433.545
38	.2544	.482	87.64	72.51	.887	.844	-3.077	21.160	17.221	469.174
39	.2720	.515	88.90	72.21	.887	.856	-2.737	21.501	17.482	503.615
40	.2894	.548	89.89	71.87	.900	.870	-2.427	21.810	17.753	558.453
41	.3072	.582	91.06	71.71	.910	.885	-2.185	22.053	18.068	572.894
42	.3418	.647	93.14	71.21	.922	.893	-1.896	22.342	18.222	608.127
43	.3769	.714	94.83	70.76	.943	.915	-1.386	22.852	18.682	676.614
44	.4124	.781	96.34	70.39	.975	.952	-0.600	23.637	19.441	816.359
45	.4468	.846	97.28	70.07	.985	.967	-0.371	23.866	19.734	884.450
46	.4820	.913	97.95	69.75	.991	.981	-0.207	24.031	20.026	954.124
47	.5171	.979	98.44	69.59	.996	.988	-0.086	24.151	20.177	1023.600
48	.5520	1.045	98.67	69.49	.999	.993	-0.031	24.207	20.271	1092.681
49	.5870	1.111	98.74	69.41	.999	.996	-0.014	24.224	20.340	1161.960
50	.6222	1.178	98.75	69.38	.000	.998	-0.010	24.228	20.373	1231.634
51	.6571	1.244	98.85	69.36	.001	.999	-0.014	24.254	20.387	1300.715
52	.6918	1.310	98.78	69.35	.001	.999	-0.014	24.282	20.432	1400.577
53	.7269	1.376	98.85	69.31	.001	.001	-0.001	24.329	20.438	1438.876
54	.7620	1.443	98.88	69.33	.001	.001	-0.001	24.359	20.445	1508.352
55	.7968	1.508	98.80	69.34	.000	.999	-0.001	24.390	1577.235	
56	.8320	1.575	98.84	69.35	.001	.999	-0.012	24.429	1646.909	
57	.8668	1.641	98.84	69.36	.000	.999	-0.011	24.454	1715.792	
58	.9018	1.707	98.84	69.35	.001	.999	-0.013	24.481	1785.071	
59	.9375	1.775	98.81	69.35	.000	.999	-0.006	24.510	1855.735	
60	.9719	1.840	98.80	69.36	.000	.999	-0.002	24.540	1923.826	
61	1.0068	1.906	98.81	69.37	.000	.998	-0.004	24.571	1992.906	
62	1.0407	2.474	98.72	69.36	.999	.999	-0.017	24.621	2086.524	
63	1.0666	3.041	98.69	69.35	.999	.999	-0.026	24.621	2180.143	
64	1.0966	3.609	98.68	69.40	.999	.997	-0.027	24.621	2247.959	
65	1.2068	4.178	98.56	69.39	.998	.997	-0.057	24.680	2368.171	
66	2.20572	4.746	98.54	69.37	.997	.998	-0.061	24.744	2462.776	
67	2.8068	5.314	98.46	69.38	.997	.998	-0.082	24.844	2555.803	
68	3.1071	5.882	98.46	69.36	.997	.999	-0.077	24.944	6150.213	
69	3.4066	6.449	98.38	69.42	.996	.996	-0.101	24.944	6743.039	
70	3.7068	7.017	98.44	69.43	.996	.995	-0.087	24.944	7337.251	
71	4.0074	7.586	98.49	69.40	.997	.997	-0.073	24.944	7932.255	

Table 21.

JOB KLD48 TAPE 3166R- FILES 117-137, RUNS 8.01-8.21 04/05/79

RUN NO. 8. POINT 10. GRID NO. 1

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO $Y+ = 35$
FREE STREAM VELOCITY =	98.962	98.962
FREE STREAM TEMPERATURE =	69.539	
WALL TEMPERATURE =	92.960	
WALL HEAT FLUX =	.07784	
FREE STREAM DENSITY =	.07602	
KINEMATIC VISCOSITY OF FLUID AT WALL =	.0001607	
DENSITY OF FLUID AT WALL =	.07279	
KINEMATIC VISCOSITY OF FLUID AT WALL =	.0001735	
WALL/FREE STREAM DENSITY RATIO =	.95762	
LOCATION REYNOLDS NUMBER (REX) =	2269045.59	
INPUT VALUE OF VELOCITY DELTA =	.77000	
INPUT VALUE OF TEMPERATURE DELTA =	.81000	
CALCULATED DELTA =		.34971
DISPLACEMENT THICKNESS (DELSTAR) =	.00000	
MOMENTUM THICKNESS (THETA) =	.09585	.595
ENERGY-DISSIPATION THICKNESS =	.06631	.1651
ENTHALPY THICKNESS =	.11758	.771
SHAPE FACTOR 12 (DELSTAR/THETA) =	.00339	.0340
SHAPE FACTOR 32 (ENERGY/THETA) =	1.44553	1.44268
MOMENTUM THICKNESS REYNOLDS NUMBER =	1.77328	1.76976
DISPLACEMENT THICKNESS REYNOLDS NUMBER =	3402.33	3412.88
SKIN FRICTION COEFFICIENT =	4918.17	4923.70
FRICTION VELOCITY =	.003137	
LAW OF THE WALL CONSTANT (K) =	4.00520	
LAW OF THE WALL CONSTANT (C) =	.41000	
WAKE STRENGTH =	5.00000	.47483
CLAUSERS 'DELTA' INTEGRAL =	-2.14283	-2.28698
CLAUSERS 'G' INTEGRAL =	15.52449	15.45673
DISPLACEMENT THICKNESS - CONSTANT DENSITY =	.08959	.09256
MOMENTUM THICKNESS - CONSTANT DENSITY =	.06703	.06724
SHAPE FACTOR 12 - CONSTANT DENSITY =	1.33665	1.37653
LOCATION -X- =	44.22000	
Z = CENTERLINE		

Table 22.

JOB KLD48 TAPE 3166R- FILES 117-137, RUNS 8.01-8.21 04/05/79

RUN NO. 8. POINT 30. GRID NO. 1

REDUCED PROFILE DATA

N	Y INCHES	Y/DELTA	U FT/SEC	T DEG.F	U/UE	THETA	UTAU	U(+)	T(+)	Y(+)
1	.0C57	.009	37.16	85.56	.376	.316	-15.426	9.283	6.648	11.022
2	.0067	.010	40.72	84.81	.411	.348	-14.542	10.167	7.330	12.946
3	.0077	.012	43.63	84.05	.441	.380	-13.816	10.892	8.007	14.870
4	.0093	.014	47.52	83.01	.480	.425	-12.844	11.864	8.940	17.947
5	.0100	.015	48.94	82.69	.494	.439	-12.490	12.218	9.236	19.294
6	.0116	.018	51.19	82.06	.517	.466	-11.927	12.781	9.802	22.372
7	.0129	.020	52.55	81.59	.531	.485	-11.587	13.121	10.217	24.873
8	.0143	.022	53.80	81.19	.544	.503	-11.275	13.433	10.583	27.566
9	.0161	.025	55.04	80.83	.556	.518	-10.967	13.741	10.908	31.028
10	.0178	.027	55.90	80.47	.565	.533	-10.752	13.957	11.231	34.298
11	.0198	.031	56.63	80.10	.572	.549	-10.570	14.139	11.559	38.146
12	.0215	.033	57.41	79.98	.580	.554	-10.375	14.333	11.670	41.416
13	.0229	.035	58.05	79.78	.587	.563	-10.216	14.493	11.847	44.109
14	.0251	.039	58.91	79.55	.595	.573	-10.001	14.707	12.056	48.341
15	.0271	.042	59.25	79.46	.599	.576	-9.916	14.793	12.137	52.168
16	.0289	.045	59.93	79.35	.606	.581	-9.744	14.964	12.238	55.651
17	.0306	.047	60.36	79.19	.610	.588	-9.633	15.075	12.379	58.421
18	.0371	.057	61.89	78.61	.625	.613	-9.255	15.453	12.898	71.424
19	.0441	.068	63.36	78.20	.640	.630	-8.889	15.820	13.267	84.890
20	.0507	.078	64.77	77.82	.654	.646	-8.538	16.171	13.607	97.586
21	.0568	.087	65.80	77.62	.665	.655	-8.280	16.428	13.791	109.320
22	.0639	.098	66.93	77.31	.676	.668	-8.096	16.712	14.069	122.978
23	.0711	.109	67.94	77.07	.687	.678	-7.745	16.964	14.280	136.828
24	.0768	.118	68.77	76.95	.695	.684	-7.539	17.170	14.396	147.792
25	.0840	.129	69.51	76.76	.702	.692	-7.353	17.355	14.566	161.642
26	.0919	.140	70.61	76.51	.713	.702	-7.080	17.628	14.765	174.916
27	.0967	.149	71.30	76.33	.721	.710	-6.905	17.803	14.951	186.073
28	.1039	.160	72.13	76.20	.729	.716	-6.699	18.009	15.065	199.923
29	.1111	.171	72.79	75.99	.736	.725	-6.534	18.174	15.258	213.773
30	.1167	.180	73.32	75.86	.741	.730	-6.451	18.307	15.375	224.545
31	.1238	.191	74.04	75.73	.748	.736	-6.222	18.487	15.485	238.203
32	.1310	.202	74.61	75.65	.756	.739	-6.030	18.678	15.562	252.053
33	.1483	.228	76.22	75.22	.770	.757	-5.677	19.031	15.945	285.332
34	.1656	.255	77.74	74.92	.786	.770	-5.298	19.411	16.213	318.611
35	.1831	.282	79.08	74.68	.799	.781	-4.965	19.743	16.435	352.274
36	.2007	.304	80.47	74.38	.813	.793	-4.617	20.091	16.700	386.130
37	.2177	.335	81.53	74.05	.824	.807	-4.353	20.356	16.996	410.832
38	.2363	.364	82.90	73.82	.838	.817	-4.011	20.697	17.206	454.611
39	.2527	.389	84.15	73.47	.850	.832	-3.698	21.011	17.524	486.159
40	.2713	.418	85.08	73.22	.860	.843	-3.465	21.423	17.747	521.938
41	.2879	.443	86.33	72.98	.872	.853	-3.154	21.555	17.962	553.870
42	.3057	.471	87.34	72.73	.883	.864	-2.902	21.806	18.186	588.111
43	.3409	.525	89.46	72.39	.894	.878	-2.373	22.335	18.494	655.823
44	.3757	.578	91.39	71.95	.923	.897	-1.890	22.818	18.886	722.765
45	.4107	.632	93.02	71.52	.940	.915	-1.484	23.225	19.272	790.092
46	.4459	.686	94.40	71.15	.954	.931	-1.139	23.569	19.609	857.804
47	.4807	.740	95.70	70.81	.967	.946	-8.14	23.894	19.914	924.746
48	.5161	.794	96.85	70.54	.979	.957	-5.527	24.181	20.151	992.842
49	.5507	.846	97.43	70.22	.985	.971	-3.82	24.326	20.438	1059.400
50	.5863	.902	98.01	70.02	.990	.979	-2.38	24.470	20.616	1127.881
51	.6207	.955	98.47	69.84	.995	.987	-1.24	24.585	20.783	1194.054
52	.6560	1.010	98.69	69.76	.997	.991	-0.67	24.641	20.858	1261.958
53	.6909	1.063	98.77	69.71	.998	.993	-0.48	24.660	20.902	1329.092
54	.7259	1.117	98.83	69.58	.999	.998	-0.32	24.676	21.014	1396.819
55	.7608	1.171	98.92	69.56	1.000	.999	-0.10	24.698	21.034	1463.554
56	.7963	1.226	98.95	69.54	1.000	1.000	-0.02	24.706	21.056	1531.843
57	.8309	1.279	98.95	69.56	1.000	1.000	-0.03	24.713	21.053	1665.343
58	.8657	1.332	98.98	69.54	1.000	1.000	-0.05	24.752	21.072	1732.670
59	.9007	1.386	98.93	69.52	1.000	1.001	-0.07	24.761	21.059	1799.997
60	.9357	1.440	98.86	69.53	1.000	1.000	-0.02	24.688	21.033	1868.093
61	.9711	1.495	98.91	69.56	1.000	1.000	-0.14	24.694	21.080	1935.420
62	.0061	1.549	98.90	69.51	1.000	1.001	-0.16	24.682	21.036	2511.354
63	1.3055	2.019	98.87	69.56	1.000	1.000	-0.22	24.686	21.036	2511.354
64	1.6055	2.471	98.89	69.60	1.000	1.000	-0.17	24.691	21.001	3088.443
65	1.9055	2.933	98.84	69.59	1.000	1.000	-0.31	24.677	21.006	3665.531
66	2.2057	3.395	98.76	69.58	1.000	1.000	-0.51	24.658	21.021	4243.004
67	2.5063	3.858	98.68	69.61	1.000	1.000	-0.71	24.637	20.991	4821.247
68	2.8057	4.318	98.64	69.60	1.000	1.000	-0.79	24.629	21.001	5397.181
69	3.1057	4.780	98.68	69.64	1.000	1.000	-0.71	24.637	20.966	5974.270
70	3.4056	5.242	98.74	69.67	1.000	1.000	-0.55	24.654	20.941	6551.166
71	3.7063	5.705	98.66	69.66	1.000	1.000	-0.70	24.638	20.946	7129.601
72	4.0061	6.166	98.72	69.70	1.000	1.000	-0.61	24.648	20.905	7706.304

Table 22.

JOB KLD48 TAPE 3166R- FILES 117-137, RUNS 8.01-8.21 04/05/79

RUN NO. 8. POINT 13. GRID NO. 1

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO $Y+ = 35$
FREE STREAM VELOCITY =	99.525	99.525
FREE STREAM TEMPERATURE =	70.160	
WALL TEMPERATURE =	93.590	
WALL HEAT FLUX =	.67784	
FREE STREAM DENSITY =	.07593	
FREE STREAM KINEMATIC VISCOSITY =	.0001611	
DENSITY OF FLUID AT WALL =	.07271	
KINEMATIC VISCOSITY OF FLUID AT WALL =	.0001739	
WALL/FREE STREAM DENSITY RATIO =	.95765	
LOCATION REYNOLDS NUMBER (REX) =	2687161.94	
INPUT VALUE OF VELOCITY DELTA =	.89000	
INPUT VALUE OF TEMPERATURE DELTA =	.94000	
CALCULATED DELTA =		.76456
DELTA 99.5% INPUT =	.00000	
DISPLACEMENT THICKNESS (DELSTAR) =	.11381	.11397
MOMENTUM THICKNESS (THETA) =	.07917	.07930
ENERGY-DISSIPATION THICKNESS =	.14027	.14031
ENTHALPY THICKNESS =	.00393	.00393
SHAPE FACTOR 12 (DELSTAR/THETA) =	1.43756	1.43722
SHAPE FACTOR 32 (ENERGY/THETA) =	1.77185	1.76951
MOMENTUM THICKNESS REYNOLDS NUMBER =	4076.92	4083.57
DISPLACEMENT THICKNESS REYNOLDS NUMBER =	5860.80	5869.00
SKIN FRICTION COEFFICIENT =	.002988	
FRICITION VELOCITY =	3.93100	
LAW OF THE WALL CONSTANT (K) =	.41000	
LAW OF THE WALL CONSTANT (C) =	5.00000	
WAKE STRENGTH =		.52880
CLAUSERS 'DELTA' INTEGRAL =	-2.65190	-2.78562
CLAUSERS 'G' INTEGRAL =	19.13555	19.15068
DISPLACEMENT THICKNESS - CONSTANT DENSITY =	.10731	.11003
MOMENTUM THICKNESS - CONSTANT DENSITY =	.08002	.08016
SHAPE FACTOR 12 - CONSTANT DENSITY =	1.34100	1.37272
LOCATION -X- =	52.18001	
Z = CENTERLINE		

Table 23.

JOB KLD48 TAPE 3166R- FILES 117-137, RUNS 8.01-8.21 04/05/79

RUN NO. 8. POINT 13. GRID NO. 1

REDUCED PROFILE DATA

N	Y INCHES	Y/ FT/SEC	U DEG.F	T U/UE	THETA UTAU	U(+)	T(+)	Y(+)
1	.0051	.0051	87.05	.352	.279 -16.406	8.912	5.764	9.666
2	.0071	.0071	85.89	.371	.329 -15.913	9.405	6.784	13.550
3	.0084	.0084	85.02	.406	.366 -15.046	10.272	7.554	13.434
4	.0091	.0091	84.40	.445	.392 -14.056	11.262	8.314	15.884
5	.0110	.0110	84.16	.460	.403 -13.676	11.642	8.085	20.763
6	.0122	.0122	83.28	.491	.440 -12.890	12.428	9.413	23.044
7	.0131	.0131	82.91	.507	.456 -12.474	12.844	9.635	24.740
8	.0153	.0153	82.66	.516	.467 -12.254	13.064	10.076	28.885
9	.0200	.0200	82.16	.533	.488 -11.817	13.501	10.405	32.653
10	.0223	.0223	81.78	.547	.504 -11.473	13.845	10.723	36.422
11	.0249	.0249	81.42	.554	.519 -11.301	14.017	10.998	39.625
12	.0259	.0259	81.11	.563	.533 -11.072	14.246	11.132	42.074
13	.0284	.0284	80.96	.567	.539 -10.963	14.355	11.283	46.031
14	.0324	.0324	80.79	.574	.546 -10.774	14.544	11.452	49.988
15	.0355	.0355	80.59	.581	.555 -10.604	14.714	11.593	53.003
16	.0371	.0371	80.44	.586	.561 -10.490	14.828	11.756	56.394
17	.0399	.0399	80.25	.592	.569 -10.336	14.982	12.220	69.207
18	.0416	.0416	79.72	.606	.592 -9.974	15.344	12.531	82.396
19	.0437	.0437	79.37	.622	.607 -9.569	15.750	12.812	94.032
20	.0503	.0503	79.05	.636	.620 -9.219	16.100	13.082	106.137
21	.0563	.0563	78.75	.645	.634 -8.987	16.331	13.339	120.080
22	.0637	.0637	78.45	.656	.646 -8.667	16.651	13.496	132.704
23	.0704	.0704	78.28	.668	.654 -8.399	16.919	13.716	143.821
24	.0763	.0763	78.03	.676	.664 -8.201	17.118	13.922	157.387
25	.0835	.0835	77.79	.684	.674 -7.991	17.326	13.972	170.388
26	.0904	.0904	77.44	.693	.677 -7.780	17.538	14.118	181.505
27	.0963	.0963	77.57	.701	.684 -7.570	17.748	14.375	194.694
28	.1033	.1033	77.28	.707	.696 -7.411	17.967	14.525	208.637
29	.1107	.1107	77.11	.714	.703 -7.254	18.084	14.624	218.812
30	.1161	.1161	77.00	.720	.708 -7.077	18.242	14.750	232.190
31	.1232	.1232	76.85	.727	.714 -6.918	18.400	14.910	245.568
32	.1303	.1303	76.67	.733	.722 -6.760	18.559	14.956	267.222
33	.1471	.1471	76.42	.747	.739 -6.411	18.907	15.056	291.0949
34	.1650	.1650	76.02	.761	.750 -6.057	19.261	15.742	343.923
35	.1825	.1825	75.73	.775	.762 -5.699	19.619	16.100	377.462
36	.2003	.2003	75.32	.788	.780 -5.368	19.950	16.409	409.116
37	.2171	.2171	75.16	.799	.787 -5.097	20.221	16.243	443.032
38	.2351	.2351	74.91	.811	.797 -4.778	20.541	16.462	475.817
39	.2525	.2525	74.64	.820	.809 -4.556	20.762	16.704	509.356
40	.2703	.2703	74.42	.833	.818 -4.236	21.082	16.891	541.010
41	.2871	.2871	74.26	.842	.825 -4.011	21.307	17.035	575.303
42	.3052	.3052	74.00	.852	.836 -3.744	21.574	17.263	595.997
43	.3537	.3537	73.29	.877	.866 -3.105	22.214	17.890	666.498
44	.4012	.4012	72.82	.902	.887 -2.479	22.839	18.306	755.997
45	.4495	.4495	72.39	.923	.905 -1.952	23.366	18.685	847.004
46	.4973	.4973	71.99	.942	.922 -1.4556	23.860	19.040	937.069
47	.5453	.5453	71.61	.959	.938 -1.026	24.292	19.368	1027.511
48	.5935	.5935	71.25	.973	.953 -6.888	24.630	19.687	1118.329
49	.6415	.6415	70.83	.983	.971 -4.433	24.875	20.057	1208.771
50	.6895	.6895	70.60	.990	.981 -2.477	25.071	20.263	1299.212
51	.7373	.7373	70.39	.995	.990 -1.32	25.186	20.444	1389.277
52	.7854	.7854	70.35	.997	.992 -1.072	25.247	20.478	1479.907
53	.8333	.8333	70.26	.999	.996 -1.37	25.281	20.561	1570.160
54	.8812	.8812	70.20	.999	.998 -1.37	25.322	20.615	1660.413
55	.9295	.9295	70.14	1.000	1.001 -1.004	25.317	20.666	1751.420
56	.9771	.9771	70.15	1.000	1.000 -1.001	25.316	20.656	1841.108
57	1.0253	1.0253	70.15	1.000	1.000 -1.002	25.307	20.659	1931.927
58	1.0731	1.0731	70.18	1.000	1.000 -1.001	25.312	20.632	2113.187
59	1.1215	1.1215	70.15	1.000	1.000 -1.006	25.299	20.664	2203.251
60	1.1693	1.1693	70.14	1.000	1.000 -1.019	25.292	20.637	2294.447
61	1.2177	1.2177	70.17	1.000	1.000 -1.026	25.305	20.660	2383.758
62	1.2651	1.2651	70.15	1.000	1.000 -1.013	25.306	20.630	2473.822
63	1.3129	1.3129	70.18	1.000	1.000 -1.012	25.297	20.622	2565.018
64	1.3613	1.3613	70.19	1.000	1.000 -1.013	25.305	20.651	2655.082
65	1.4091	1.4091	70.16	1.000	1.000 -1.027	25.291	20.650	2745.147
66	1.4569	1.4569	70.16	1.000	1.000 -1.011	25.307	20.635	2836.154
67	1.5052	1.5052	70.18	1.000	1.000 -1.027	25.291	20.650	3508.625
68	1.5621	1.5621	70.16	1.000	1.000 -1.051	25.267	20.616	4181.661
69	1.2193	1.2193	70.20	1.000	1.000 -1.069	25.249	20.606	4854.320
70	2.5763	2.5763	70.21	1.000	1.000 -1.045	25.273	20.597	5526.791
71	2.9332	2.9332	70.22	1.000	1.000 -1.045	25.248	20.606	6200.016
72	3.2905	3.2905	70.21	1.000	1.000 -1.070	25.238	20.611	6873.429
73	3.6479	3.6479	70.20	1.000	1.000 -1.080	25.271	20.601	7547.219
74	4.0055	4.0055	70.21	1.000	1.000 -1.047	25.271	20.601	7547.219

Table 23.

JOB KLD48 TAPE 3166R- FILES 117-137, RUNS 8.01-8.21 04/05/79

RUN NO. 8. POINT 14. GRID NO. 1

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	SUBLAYER FUNCTION FROM WALL TO $Y+ = 35$	STANDARD
FREE STREAM VELOCITY	= 99.429		99.429
FREE STREAM TEMPERATURE	= 70.635		
WALL TEMPERATURE	= 94.510		
WALL HEAT FLUX	= .07720		
FREE STREAM DENSITY	= .07586		
KINEMATIC VISCOSITY	= .0001313		
DENSITY OF FLUID AT WALL	= .07259		
KINEMATIC VISCOSITY OF FLUID AT WALL	= .0001744		
WALL/FREE STREAM DENSITY RATIO	= .95692		
LOCATION REYNOLDS NUMBER (REX)	= 3099954.62		
INPUT VALUE OF VELOCITY DELTA	= .94000		
INPUT VALUE OF TEMPERATURE DELTA	= .99000		
CALCULATED DELTA	= .88012		
DISPLACEMENT THICKNESS (DELSTAR)	= .00000		
MOMENTUM THICKNESS (θ)	= .12815		.12817
ENERGY-DISSIPATION THICKNESS	= .08944		.08970
ENTHALPY THICKNESS	= .15874		.15893
SHAPE FACTOR 12 (DELSTAR/ θ)	= 1.43283		1.42892
SHAPE FACTOR 32 (ENERGY/ θ)	= 1.77483		1.77180
MOMENTUM THICKNESS REYNOLDS NUMBER	= 4594.11		4607.53
DISPLACEMENT THICKNESS REYNOLDS NUMBER	= 6582.58		6583.79
SKIN FRICTION COEFFICIENT	= .002936		
FRICTION VELOCITY	= 3.89448		
LAW OF THE WALL CONSTANT (K)	= .41000		
LAW OF THE WALL CONSTANT (C)	= 5.00000		
WAKE STRENGTH	= .50814		
CLAUSERS 'DELTA' INTEGRAL	= -2.98559		-3.15784
CLAUSERS 'G' INTEGRAL	= 21.68469		21.51733
DISPLACEMENT THICKNESS - CONSTANT DENSITY	= .12031		.12369
MOMENTUM THICKNESS - CONSTANT DENSITY	= .09040		.09068
SHAPE FACTOR 12 - CONSTANT DENSITY	= 1.33078		1.36405
LOCATION -X-	60.35001		
Z = CENTERLINE			

Table 24.

JOB KLD48 TAPE 3166R- FILES 117-137, RUNS 8.01-8.21 04/05/79

RUN NO. 8. POINT 14. GRID NO. 1

REDUCED PROFILE DATA

N	Y INCHES	Y/DELTA	U FT/SEC	T DEG.F	U/UE	THETA	UTAU	U(+)	U(-)	Y(+)
1	.0067	.008	39.25	86.43	.395	.338	-15.453	10.078	7.098	12.526
2	.0079	.009	42.25	85.45	.425	.379	-14.681	10.849	7.959	14.760
3	.0088	.010	44.50	65.05	.448	.396	-14.105	11.425	8.311	16.435
4	.0102	.012	46.93	84.45	.472	.421	-13.481	12.050	8.842	19.040
5	.0111	.013	48.38	84.07	.487	.437	-13.107	12.423	9.174	20.716
6	.0126	.014	50.22	83.61	.505	.457	-12.636	12.895	9.581	23.507
7	.0143	.016	51.67	83.24	.520	.472	-12.263	13.267	9.903	26.671
8	.0150	.017	52.27	83.04	.526	.480	-12.109	13.422	10.080	27.974
9	.0170	.019	53.37	82.62	.537	.498	-11.827	13.704	10.446	31.697
10	.0190	.022	54.70	82.29	.550	.512	-11.486	14.045	10.744	35.419
11	.0210	.024	55.44	82.10	.556	.520	-11.294	14.237	10.907	39.142
12	.0226	.026	56.11	81.65	.564	.539	-11.124	14.407	11.306	42.120
13	.0243	.028	56.59	81.62	.569	.540	-11.001	14.530	11.325	45.284
14	.0260	.030	57.18	81.47	.575	.546	-10.848	14.682	11.461	48.448
15	.0280	.032	57.71	81.16	.580	.559	-10.711	14.819	11.732	52.170
16	.0299	.034	58.32	80.99	.587	.566	-10.556	14.975	11.882	55.707
17	.0316	.036	58.82	80.89	.592	.571	-10.426	15.104	11.973	58.871
18	.0379	.043	60.21	80.49	.606	.587	-10.070	15.461	12.323	70.597
19	.0450	.051	61.63	80.07	.620	.605	-9.706	15.825	12.688	83.811
20	.0518	.059	62.97	79.74	.633	.619	-9.361	16.169	12.984	96.468
21	.0579	.066	63.88	79.44	.643	.631	-9.127	16.404	13.244	107.821
22	.0650	.074	65.03	79.19	.654	.642	-8.832	16.699	13.466	121.036
23	.0724	.082	65.86	78.96	.663	.651	-8.615	16.916	13.662	134.809
24	.0778	.088	66.83	78.87	.672	.655	-8.371	17.160	13.749	144.860
25	.0852	.097	67.56	78.70	.679	.662	-8.184	17.347	13.899	158.633
26	.0922	.105	68.31	78.44	.687	.673	-7.989	17.541	14.126	171.661
27	.0982	.112	68.97	78.27	.694	.680	-7.820	17.710	14.275	182.829
28	.1054	.120	69.64	78.02	.700	.691	-7.649	17.882	14.494	196.230
29	.1124	.128	70.28	77.93	.707	.694	-7.486	18.045	14.570	209.258
30	.1177	.134	70.82	77.88	.712	.696	-7.347	18.184	14.613	219.123
31	.1250	.142	71.38	77.66	.718	.706	-7.203	18.328	14.810	232.710
32	.1318	.150	71.93	77.42	.723	.716	-7.060	18.471	15.021	245.366
33	.1491	.169	73.27	77.08	.737	.730	-6.717	18.814	15.322	277.566
34	.1666	.189	74.63	76.90	.751	.738	-6.368	19.163	15.476	310.137
35	.1838	.209	75.68	76.57	.761	.752	-6.099	19.432	15.770	342.150
36	.2020	.230	76.83	76.29	.773	.763	-5.803	19.728	16.011	376.025
37	.2192	.249	77.88	76.09	.783	.772	-5.533	19.998	16.192	408.038
38	.2373	.270	78.99	75.77	.794	.785	-5.248	20.282	16.474	441.726
39	.2638	.288	79.87	75.60	.803	.792	-5.021	20.509	16.615	472.437
40	.2720	.309	80.81	75.35	.813	.803	-4.761	20.750	16.841	506.311
41	.2890	.328	81.79	75.09	.823	.813	-4.530	21.001	17.066	537.952
42	.3068	.349	82.61	74.82	.831	.825	-4.318	21.212	17.301	571.082
43	.3554	.404	85.10	74.37	.856	.844	-3.679	21.852	17.700	661.538
44	.4030	.458	87.42	73.89	.879	.864	-3.084	22.447	18.126	750.132
45	.4508	.512	89.41	73.42	.899	.883	-2.572	22.958	18.535	839.099
46	.4993	.567	91.29	72.94	.918	.903	-2.089	23.442	18.958	929.369
47	.5471	.622	93.11	72.52	.936	.921	-1.622	23.909	19.323	1018.336
48	.5954	.677	94.62	72.20	.952	.935	-1.235	24.296	19.610	1108.238
49	.6428	.730	95.97	71.79	.965	.952	-0.888	24.642	19.967	1196.456
50	.6912	.785	97.01	71.54	.976	.962	-0.620	24.910	20.190	1286.540
51	.7393	.840	97.94	71.35	.985	.970	-0.383	25.147	20.354	1376.065
52	.7874	.895	98.54	71.15	.991	.979	-0.229	25.302	20.535	1465.590
53	.8348	.949	98.89	70.96	.995	.986	-0.139	25.392	20.694	1553.813
54	.883C	1.003	99.18	70.79	.998	.994	-0.061	25.468	20.846	1643.522
55	.9310	1.058	99.36	70.68	1.000	.998	-0.012	25.516	20.940	1732.863
56	.979C	1.112	99.39	70.67	1.000	.999	-0.011	25.520	20.955	1822.202
57	1.C267	1.167	99.46	70.63	1.000	1.000	0.007	25.537	20.991	1910.983
58	1.0752	1.222	99.45	70.63	1.000	1.000	0.004	25.535	20.985	2001.255
59	1.1232	1.276	99.41	70.65	1.000	1.000	0.004	25.526	20.973	2090.592
60	1.1707	1.330	99.43	70.66	1.000	0.999	-0.001	25.527	20.958	2179.000
61	1.2190	1.385	99.42	70.64	1.000	1.000	0.003	25.550	20.981	2268.898
62	1.2670	1.440	99.51	70.64	1.001	1.000	0.020	25.552	20.977	2235.582
63	1.3146	1.494	99.51	70.62	1.001	1.000	0.022	25.552	20.993	2446.832
64	1.3632	1.549	99.34	70.60	0.999	1.001	-0.023	25.508	21.011	24537.288
65	1.4114	1.604	99.36	70.61	1.000	1.001	-0.011	25.519	21.003	2626.999
66	1.4556	1.657	99.44	70.64	1.000	0.999	-0.022	25.533	20.979	2714.849
67	1.5074	1.713	99.38	70.65	0.999	0.999	-0.013	25.517	20.970	2805.677
68	1.8641	2.118	99.35	70.67	0.999	0.999	-0.020	25.511	20.956	3469.579
69	2.2210	2.524	99.32	70.69	0.999	0.998	-0.028	25.502	20.937	4133.853
70	2.5782	2.929	99.27	70.68	0.998	0.998	-0.042	25.489	20.942	4798.685
71	2.9351	3.335	99.23	70.69	0.998	0.998	-0.050	25.481	20.936	5462.959
72	3.2918	3.740	99.15	70.72	0.997	0.996	-0.072	25.459	20.907	6126.860
73	3.6496	4.147	99.22	70.71	0.998	0.997	-0.064	25.477	20.917	6792.809
74	4.0072	4.553	99.23	70.69	0.998	0.998	-0.051	25.479	20.932	7458.386

Table 24.

JOB KLD48 TAPE 3166R- FILES 117-137, RUNS 8.01-8.21 04/05/79

RUN NO. 8. POINT 15. GRID NO. 1

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	SUBLAYER FUNCTION FROM WALL TO $Y^+=35$	STANDARD
FREE STREAM VELOCITY	= 98.651	98.651	
FREE STREAM TEMPERATURE	= 69.252		
WALL TEMPERATURE	= 93.150		
WALL HEAT FLUX	= .07592		
FREE STREAM DENSITY	= .07646		
FREE STREAM KINEMATIC VISCOSITY	= .0001597		
DENSITY OF FLUID AT WALL	= .07315		
KINEMATIC VISCOSITY OF FLUID AT WALL	= .0001727		
WALL/FREE STREAM DENSITY RATIO	= .95677		
LOCATION REYNOLDS NUMBER (REX)	= 3106267.22		
INPUT VALUE OF VELOCITY DELTA	= .99000		
INPUT VALUE OF TEMPERATURE DELTA	= 1.04000		
CALCULATED DELTA			.92813
DELTA 99.5% INPUT	= .00000		
DISPLACEMENT THICKNESS (DELSTAR)	= .13942	.13957	
MOMENTUM THICKNESS (THETA)	= .09737	.09752	
ENERGY-DISSIPATION THICKNESS	= .17233	.17238	
ENTHALPY THICKNESS	= .00446	.00446	
SHAPE FACTOR 12 (DELSTAR/THETA)	= 1.43175	1.43113	
SHAPE FACTOR 32 (ENERGY/THETA)	= 1.76974	1.76763	
MOMENTUM THICKNESS REYNOLDS NUMBER	= 5011.94	5019.59	
DISPLACEMENT THICKNESS REYNOLDS NUMBER	= 7175.86	7183.68	
SKIN FRICTION COEFFICIENT	= .002829		
FRICITION VELOCITY	= 3.79312		
LAW OF THE WALL CONSTANT (K)	= .41000		
LAW OF THE WALL CONSTANT (C)	= 5.00000		
WAKE STRENGTH			.58780
CLAUSERS 'DELTA' INTEGRAL	= -3.36358	-3.51392	
CLAUSERS 'G' INTEGRAL	= 24.74486	24.74065	
DISPLACEMENT THICKNESS - CONSTANT DENSITY	= .13214	.13511	
MOMENTUM THICKNESS - CONSTANT DENSITY	= .09838	.09853	
SHAPE FACTOR 12 - CONSTANT DENSITY	= 1.34325	1.37121	

LOCATION -X- 60.35001

Z = +6 INCHES

Table 25.

JOB KLD48 TAPE 3166R- FILES 117-137, RUNS 8.01-8.21 04/05/79

RUN NO. 8. POINT 15. GRID NO. 1

REDUCED PROFILE DATA

N	INCHES	Y/	U	T	U/UE	THETA	UTAU	U (+)	T (+)	Y (+)
1	.0056	.006	34.70	85.91	.352	.303	-16.861	9.147	6.352	10.304
2	.0072	.008	38.79	84.58	.393	.358	-15.862	10.226	7.514	13.233
3	.0082	.009	41.90	83.92	.425	.386	-14.962	11.046	8.097	15.063
4	.0092	.010	44.12	83.36	.447	.410	-14.025	11.630	8.585	16.893
5	.0115	.011	45.45	82.98	.461	.425	-14.477	12.535	9.426	18.358
6	.0132	.012	47.55	82.40	.482	.450	-13.477	13.027	9.719	21.103
7	.0142	.014	49.41	82.07	.501	.464	-12.777	13.231	9.984	24.214
8	.0158	.015	50.19	81.77	.509	.476	-12.777	13.543	10.496	26.045
9	.0182	.020	51.37	81.18	.521	.501	-12.108	10.816	33.366	28.973
10	.0199	.021	52.72	80.82	.534	.516	-12.108	10.816	36.477	39.223
11	.0214	.023	53.29	80.51	.540	.529	-11.959	11.088	39.223	42.517
12	.0232	.025	53.99	80.39	.547	.534	-11.773	11.193	45.812	49.472
13	.0250	.027	54.65	80.24	.554	.540	-11.599	11.328	52.584	55.878
14	.0270	.029	55.14	79.99	.563	.551	-11.47	11.543	67.592	70.004
15	.0287	.031	55.59	79.59	.571	.570	-11.149	11.959	104.380	117.192
16	.0305	.033	56.36	79.52	.574	.576	-11.080	12.083	12.480	13.830
17	.0369	.040	58.24	78.92	.590	.595	-10.653	12.832	13.442	14.043
18	.0442	.048	59.74	78.52	.606	.612	-10.558	13.578	13.821	14.436
19	.0506	.055	60.90	78.14	.617	.628	-9.952	13.821	14.158	153.797
20	.0570	.061	62.02	77.83	.629	.641	-9.657	14.320	166.609	177.957
21	.0640	.069	62.99	77.67	.639	.648	-9.401	14.478	189.854	202.848
22	.0710	.077	64.11	77.39	.650	.659	-9.105	14.631	213.830	226.459
23	.0767	.083	64.60	77.15	.655	.670	-8.976	14.736	14.896	15.098
24	.0840	.091	65.47	77.01	.663	.675	-8.775	14.896	15.027	15.402
25	.0910	.098	66.33	76.82	.672	.683	-8.521	14.896	15.402	15.802
26	.0972	.105	66.83	76.64	.677	.691	-8.388	15.090	15.695	16.609
27	.1037	.112	67.60	76.47	.685	.698	-8.185	15.332	15.856	16.262
28	.1108	.119	67.95	76.35	.689	.703	-8.094	15.691	16.027	16.289
29	.1168	.126	68.78	76.17	.697	.711	-7.874	15.896	16.437	16.870
30	.1237	.133	69.28	76.03	.702	.717	-7.744	15.963	16.437	16.998
31	.1308	.141	69.78	75.94	.707	.720	-7.613	16.051	16.437	16.998
32	.1476	.159	71.14	75.59	.721	.735	-7.252	16.869	16.496	17.057
33	.1654	.178	72.41	75.26	.734	.749	-6.918	16.909	16.695	17.781
34	.1826	.197	73.33	75.07	.743	.756	-6.676	17.332	17.853	18.117
35	.2012	.217	74.69	74.88	.757	.765	-6.316	17.593	18.108	18.443
36	.2179	.235	75.72	74.58	.768	.777	-6.045	18.463	18.823	19.998
37	.2360	.254	76.87	74.41	.779	.784	-5.742	19.963	20.266	20.506
38	.2529	.273	77.78	74.17	.788	.794	-5.502	20.506	20.823	21.511
39	.2710	.292	78.63	73.92	.797	.805	-5.279	21.729	21.977	22.470
40	.2880	.310	79.87	73.80	.810	.810	-4.951	21.251	21.593	22.172
41	.3060	.330	80.61	73.63	.817	.817	-4.757	21.869	22.470	23.603
42	.3538	.381	82.95	73.09	.841	.839	-4.139	22.448	22.886	23.511
43	.4022	.433	85.15	72.51	.863	.864	-3.560	23.976	24.488	25.114
44	.4496	.484	87.15	72.08	.883	.882	-3.032	24.512	25.083	25.843
45	.4982	.517	89.16	71.69	.904	.898	-2.496	25.568	26.188	26.999
46	.5462	.589	90.92	71.28	.922	.915	-2.123	26.969	27.520	28.086
47	.5938	.640	92.46	70.90	.937	.931	-1.628	27.339	28.753	29.269
48	.6421	.692	93.97	70.62	.953	.943	-1.233	27.775	28.762	29.511
49	.6900	.743	95.23	70.30	.965	.956	-0.902	28.040	28.273	29.158
50	.7382	.795	96.07	70.04	.974	.967	-0.680	28.528	29.552	30.437
51	.7856	.846	96.98	69.72	.983	.980	-0.440	29.568	30.188	31.913
52	.8342	.899	97.59	69.56	.989	.987	-0.280	30.568	31.643	32.867
53	.8820	.950	98.03	69.49	.994	.990	-0.164	31.844	32.753	34.144
54	.9300	1.002	98.36	69.43	.997	.993	-0.077	32.931	33.808	35.203
55	.9780	1.054	98.60	69.34	.999	.996	-0.014	33.944	34.886	37.906
56	1.0260	1.105	98.56	69.24	1.000	1.001	-0.025	34.976	35.957	38.709
57	1.0736	1.157	98.67	69.26	1.000	1.000	-0.005	35.013	36.957	39.030
58	1.1216	1.208	98.73	69.27	1.001	1.000	-0.020	36.028	37.982	40.528
59	1.1696	1.260	98.63	69.23	1.000	1.001	-0.006	36.022	37.945	41.228
60	1.2176	1.312	98.70	69.27	1.001	1.000	-0.014	36.013	37.971	41.316
61	1.2658	1.364	98.67	69.24	1.000	1.000	-0.019	36.027	37.996	41.403
62	1.3134	1.415	98.72	69.21	1.001	1.002	-0.008	36.016	37.012	41.493
63	1.3622	1.468	98.68	69.20	1.001	1.002	-0.014	36.021	37.001	41.580
64	1.4098	1.519	98.70	69.21	1.001	1.002	-0.002	36.010	37.035	42.667
65	1.4575	1.570	98.66	69.17	1.000	1.003	-0.011	36.019	37.043	42.756
66	1.5060	1.623	98.69	69.16	1.000	1.004	-0.001	36.007	37.054	43.659
67	1.5540	1.670	98.65	69.26	1.000	1.000	-0.029	36.010	37.062	44.062
68	1.6029	1.727	98.65	69.25	1.000	1.000	-0.001	36.007	37.064	44.882
69	2.2198	2.392	98.66	69.25	1.000	1.000	-0.029	36.010	37.065	45.166
70	2.5769	2.776	98.66	69.25	1.000	1.000	-0.047	36.010	37.099	46.999
71	2.9337	3.161	98.54	69.21	1.000	1.002	-0.052	36.010	37.099	47.166
72	3.2911	3.566	98.47	69.20	1.000	1.002	-0.067	36.010	37.093	47.331
73	3.6484	3.931	98.45	69.19	1.000	1.003	-0.067	36.010	37.093	47.331
74	4.0059	4.316	98.40	69.10	1.000	1.006	-0.067	36.010	37.093	47.331

Table 25.

JOB KLD48 TAPE 3166R- FILES 117-137, RUNS 8.01-8.21 04/05/79

RUN NO. 8. POINT 16. GRID NO. 1

BOUNDARY LAYER PROPERTIES

LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO $y^+=35$
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FREE STREAM VELOCITY	=	98.476	98.476
FREE STREAM TEMPERATURE	=	69.477	
WALL TEMPERATURE	=	93.780	
WALL HEAT FLUX	=	.07641	
FREE STREAM DENSITY	=	.07643	
FREE STREAM KINEMATIC VISCOSITY	=	.0001598	
DENSITY OF FLUID AT WALL	=	.07307	
KINEMATIC VISCOSITY OF FLUID AT WALL	=	.0001731	
WALL/FREE STREAM DENSITY RATIO	=	.95609	
LOCATION REYNOLDS NUMBER (REX)	=	3098418.12	
INPUT VALUE OF VELOCITY DELTA	=	.99000	
INPUT VALUE OF TEMPERATURE DELTA	=	1.04000	
CALCULATED DELTA	=		.91030
DELTA 99.5% INPUT	=	.00000	
DISPLACEMENT THICKNESS (DELSTAR)	=	.13722	.13709
MOMENTUM THICKNESS (THETA)	=	.09504	.09542
ENERGY-DISSIPATION THICKNESS	=	.16831	.16864
ENTHALPY THICKNESS	=	.00469	.00471
SHAPE FACTOR 12 (DELSTAR/THETA)	=	1.44375	1.43668
SHAPE FACTOR 32 (ENERGY/THETA)	=	1.77083	1.76736
MOMENTUM THICKNESS REYNOLDS NUMBER	=	4879.66	4899.00
DISPLACEMENT THICKNESS REYNOLDS NUMBER	=	7045.04	7038.29
SKIN FRICTION COEFFICIENT	=	.002840	
FRICTION VELOCITY	=	3.79496	
LAW OF THE WALL CONSTANT (K)	=	.41000	
LAW OF THE WALL CONSTANT (C)	=	5.00000	
WAKE STRENGTH	=		.58622
CLAUSERS 'DELTA' INTEGRAL	=	-3.23069	-3.43530
CLAUSERS 'G' INTEGRAL	=	24.54730	24.18402
DISPLACEMENT THICKNESS - CONSTANT DENSITY	=	.12852	.13239
MOMENTUM THICKNESS - CONSTANT DENSITY	=	.09608	.09647
SHAPE FACTOR 12 - CONSTANT DENSITY	=	1.33765	1.37230

LOCATION -X- 60.35001

Z = -6 INCHES

Table 26.

JOB KLD48 TAPE 3166R- FILES 117-137, RUNS 8.01-8.21 04/05/79

RUN NO. 8. POINT 16. GRID NO. 1

REDUCED PROFILE DATA

N	Y INCHES	Y'/	U FT/SEC	T DEG.F	U/UE	THETA	U-UE	U(+)	T(+)	Y(+)
1	.0080	.009	40.87	84.77	.415	.371	-15.180	10.770	7.847	14.675
2	.0092	.010	42.85	84.22	.435	.393	-14.658	11.291	8.325	16.868
3	.0103	.011	44.87	83.46	.456	.424	-14.125	11.825	6.971	18.878
4	.0112	.012	46.43	83.03	.472	.442	-13.714	12.235	9.361	20.523
5	.0124	.014	48.42	82.63	.492	.459	-13.191	12.758	9.716	22.716
6	.0139	.015	49.46	82.31	.502	.472	-12.916	13.033	9.987	25.457
7	.0156	.017	51.05	81.96	.518	.485	-12.496	13.453	10.274	28.564
8	.0165	.018	51.84	81.84	.526	.491	-12.290	13.659	10.403	30.208
9	.0204	.022	52.57	81.54	.534	.504	-12.096	13.853	10.659	33.680
10	.0223	.024	53.33	81.14	.542	.520	-11.897	14.052	11.011	37.335
11	.0239	.026	54.11	80.96	.549	.528	-11.690	14.259	11.168	40.625
12	.0256	.028	54.93	80.58	.558	.543	-11.475	14.474	11.500	43.732
13	.0274	.030	55.22	80.22	.561	.558	-11.400	14.550	11.808	46.838
14	.0294	.032	56.06	80.00	.569	.556	-11.176	14.773	11.779	50.128
15	.0316	.035	56.45	80.18	.573	.560	-11.075	14.874	11.847	53.052
16	.0326	.036	57.13	79.98	.580	.566	-10.894	15.056	12.023	57.803
17	.0328	.043	57.38	79.86	.583	.573	-10.830	15.119	12.120	59.996
18	.0352	.051	58.80	79.36	.597	.593	-10.456	15.493	12.559	71.682
19	.0466	.051	60.22	79.00	.611	.608	-10.082	15.668	12.870	85.215
20	.0530	.058	61.36	78.56	.623	.626	-9.776	16.173	13.255	96.911
21	.0650	.065	62.21	78.28	.632	.638	-9.555	16.394	13.503	107.876
22	.0685	.073	63.36	78.06	.644	.647	-9.248	16.701	13.692	121.582
23	.0732	.080	64.26	77.94	.653	.652	-9.017	16.933	13.792	133.826
24	.0792	.087	64.91	77.75	.659	.660	-8.844	17.105	13.960	144.791
25	.0865	.095	65.76	77.53	.668	.669	-8.616	17.334	14.155	158.132
26	.0936	.103	66.50	77.33	.675	.669	-8.425	17.524	14.156	171.107
27	.0990	.109	67.24	77.30	.683	.678	-8.232	17.717	14.355	180.975
28	.1060	.116	67.86	77.07	.689	.688	-8.067	17.882	14.553	193.768
29	.1130	.124	68.56	76.84	.696	.697	-7.883	18.067	14.759	206.560
30	.1196	.131	69.06	76.70	.701	.703	-7.752	18.197	14.878	218.621
31	.1260	.138	69.51	76.53	.706	.710	-7.633	18.316	15.021	230.317
32	.1331	.146	70.06	76.38	.711	.716	-7.489	18.460	15.152	243.292
33	.1502	.165	71.46	76.18	.726	.724	-7.119	18.830	15.331	274.542
34	.1678	.184	72.74	75.95	.739	.734	-6.783	19.167	15.528	306.706
35	.1856	.204	73.79	75.62	.749	.747	-6.505	19.444	15.820	339.235
36	.2032	.223	74.92	75.34	.761	.759	-6.208	19.741	16.058	371.399
37	.2202	.242	76.07	75.03	.773	.771	-5.903	20.046	16.329	402.466
38	.2362	.262	77.03	74.84	.782	.779	-5.650	20.299	16.492	435.360
39	.2552	.280	78.17	74.63	.794	.788	-5.352	20.597	16.680	466.428
40	.2732	.300	79.06	74.38	.803	.798	-5.116	20.833	16.898	499.322
41	.2933	.319	79.98	74.19	.812	.806	-4.874	21.075	17.062	530.572
42	.3063	.339	80.81	73.97	.821	.815	-4.654	21.295	17.254	563.467
43	.3562	.391	83.03	73.42	.845	.838	-4.031	21.918	17.735	651.003
44	.4041	.444	85.42	72.97	.867	.856	-3.441	22.508	18.129	738.539
45	.4522	.497	87.47	72.57	.888	.873	-2.900	23.049	18.475	826.075
46	.5000	.549	89.49	72.02	.909	.895	-2.367	23.582	18.953	913.794
47	.5986	.603	91.20	71.58	.926	.914	-1.917	24.032	19.337	1002.610
48	.5965	.655	92.80	71.25	.942	.927	-1.495	24.455	19.622	1090.146
49	.6443	.708	94.24	70.86	.957	.943	-1.115	24.834	19.967	1177.500
50	.6920	.760	95.41	70.56	.969	.955	-0.807	25.142	20.224	1264.571
51	.7401	.813	96.35	70.27	.978	.967	-0.561	25.388	20.474	1352.572
52	.7860	.866	97.17	69.97	.987	.980	-0.345	25.604	20.735	1440.109
53	.8362	.919	97.61	69.93	.991	.982	-0.228	25.722	20.776	1528.193
54	.8845	.972	98.04	69.70	.996	.991	-0.116	25.834	20.972	1616.860
55	.9320	1.024	98.29	69.57	1.000	.997	-0.050	25.899	21.087	1703.266
56	.9800	1.077	98.45	69.55	1.000	.999	-0.006	25.943	21.106	1790.985
57	1.0282	1.130	98.40	69.51	1.000	.999	-0.019	25.930	21.139	1879.069
58	1.0763	1.182	98.54	69.51	1.001	.999	-0.017	25.966	21.137	1966.971
59	1.1242	1.235	98.48	69.45	1.000	1.001	-0.002	25.951	21.189	2054.507
60	1.1726	1.288	98.46	69.47	1.000	1.000	-0.003	25.946	21.175	2142.957
61	1.2206	1.341	98.50	69.46	1.000	1.001	-0.006	25.955	21.183	2230.676
62	1.2682	1.393	98.49	69.48	1.000	1.000	-0.004	25.953	21.167	2317.664
63	1.3158	1.445	98.52	69.49	1.000	1.000	-0.011	25.960	21.157	2404.652
64	1.3642	1.499	98.51	69.47	1.000	1.000	-0.010	25.959	21.173	2493.102
65	1.4122	1.551	98.53	69.49	1.001	.999	-0.015	25.964	21.154	2580.821
66	1.4568	1.604	98.42	69.50	1.000	.999	-0.014	25.935	21.148	2667.809
67	1.5054	1.657	98.46	69.52	1.000	.998	-0.004	25.945	21.128	2756.625
68	1.8650	2.049	98.50	69.54	1.000	.998	-0.006	25.955	21.116	3408.304
69	2.2221	2.441	98.49	69.51	1.000	.998	-0.003	25.952	21.135	4060.897
70	2.5797	2.834	98.42	69.56	1.000	.997	-0.016	25.934	21.096	4714.403
71	2.9363	3.226	98.48	69.56	1.000	.996	-0.001	25.950	21.091	5366.082
72	3.2936	3.618	98.36	69.62	1.000	.994	-0.025	25.924	21.047	6019.041
73	3.6508	4.011	98.36	69.65	1.000	.993	-0.030	25.919	21.013	6671.816
74	4.0082	4.403	98.40	69.67	1.000	.992	-0.021	25.928	20.998	7324.957

Table 26.

JOB KLD48 TAPE 3166R- FILES 117-137, RUNS 8.01-8.21 04/05/79

RUN NO. 8. POINT 17. GRID NO. 1

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO $Y^+=35$
FREE STREAM VELOCITY =	98.14	98.614
FREE STREAM TEMPERATURE =	70.040	
WALL TEMPERATURE =	95.010	
WALL HEAT FLUX =	.07759	
FREE STREAM DENSITY =	.07634	
FREE STREAM KINEMATIC VISCOSITY =	.0001601	
DENSITY OF FLUID AT WALL =	.07291	
KINEMATIC VISCOSITY OF FLUID AT WALL =	.0001737	
WALL/FREE STREAM DENSITY RATIO =	.95498	
LOCATION REYNOLDS NUMBER (REX) =	3510027.12	
INPUT VALUE OF VELOCITY DELTA =	1.12000	
INPUT VALUE OF TEMPERATURE DELTA =	1.17000	
CALCULATED DELTA =		.98175
DISPLACEMENT THICKNESS (DELSTAR) =	.00000	
MOMENTUM THICKNESS (THETA) =	.14349	.14353
ENERGY-DISSIPATION THICKNESS =	.10037	.10059
ENTHALPY THICKNESS =	.17814	.17829
SHAPE FACTOR 12 (DELSTAR/THETA) =	.00512	.00513
SHAPE FACTOR 32 (ENERGY/THETA) =	1.42968	1.42692
MOMENTUM THICKNESS REYNOLDS NUMBER =	1.77486	1.77245
DISPLACEMENT THICKNESS REYNOLDS NUMBER =	5150.40	5161.75
SKIN FRICTION COEFFICIENT =	7363.42	7365.42
FRICTION VELOCITY =	.002849	
LAW OF THE WALL CONSTANT (K) =	3.60844	
LAW OF THE WALL CONSTANT (C) =	.41000	
WAKE STRENGTH =	5.00000	.53724
CLAUSERS 'DELTA' INTEGRAL =	-3.41653	-3.58388
CLAUSERS 'G' INTEGRAL =	24.74967	24.61548
DISPLACEMENT THICKNESS - CONSTANT DENSITY =	.13516	.13841
MOMENTUM THICKNESS - CONSTANT DENSITY =	.10146	.10169
SHAPE FACTOR 12 - CONSTANT DENSITY =	1.33213	1.36101
LOCATION -X- =	68.39999	
Z = CENTERLINE		

Table 27.

JOB KLD4B TAPE 3166R- FILES 117-137, RUNS 8.01-8.21 04/05/79

RUN NO. 8. POINT 17. GRID NO. 1

REDUCED PRCFILE DATA

N	INCHES	Y/ INCHES	U FT/SEC	T DEG.F	U/UE	THETA	U-TAU	U-UE	U(+)	T(+)	Y(+)
1	.0064	.007	36.92	87.01	.374	.320	-16.200	9.693	6.871	11.746	
2	.0076	.008	39.97	86.02	.405	.360	-15.395	10.495	7.721	13.939	
3	.0086	.009	42.51	85.39	.431	.385	-14.733	11.161	8.265	15.765	
4	.0095	.010	44.53	84.92	.452	.404	-14.202	11.692	8.667	17.409	
5	.0106	.011	46.30	84.36	.470	.426	-13.736	12.158	9.146	19.419	
6	.0123	.013	48.41	83.64	.491	.455	-13.181	12.713	9.765	22.524	
7	.0137	.014	49.73	83.20	.504	.473	-12.837	13.059	10.144	25.082	
8	.0147	.015	50.49	82.95	.512	.483	-12.637	13.257	10.359	26.909	
9	.0166	.017	51.90	82.58	.526	.498	-12.267	13.626	10.674	30.380	
10	.0190	.019	52.90	82.10	.536	.517	-12.005	13.889	11.089	34.764	
11	.0210	.021	53.93	81.85	.547	.527	-11.733	14.161	11.303	36.418	
12	.0223	.023	54.42	81.64	.552	.535	-11.603	14.290	11.481	40.793	
13	.0239	.024	55.07	81.37	.556	.546	-11.435	14.459	11.718	43.715	
14	.0260	.027	55.68	81.17	.565	.554	-11.273	14.621	11.886	47.552	
15	.0276	.028	56.14	80.94	.569	.564	-11.152	14.742	12.088	50.475	
16	.0300	.031	56.87	80.69	.577	.573	-10.960	14.933	12.297	54.859	
17	.0313	.032	57.13	80.59	.579	.577	-10.892	15.001	12.383	57.234	
18	.0377	.038	58.61	80.24	.594	.592	-10.503	15.390	12.686	68.925	
19	.0445	.045	60.05	79.88	.609	.606	-10.126	15.767	12.992	81.348	
20	.0516	.053	61.36	79.42	.622	.624	-9.781	16.113	13.391	94.318	
21	.0577	.059	62.25	79.13	.631	.636	-9.547	16.346	13.641	105.461	
22	.0647	.066	63.20	78.88	.641	.646	-9.299	16.595	13.856	118.249	
23	.0717	.073	64.16	78.66	.651	.655	-9.046	16.848	14.040	131.037	
24	.0775	.079	65.13	78.47	.660	.663	-8.793	17.101	14.210	141.632	
25	.0849	.087	65.93	78.32	.669	.668	-8.582	17.312	14.334	155.150	
26	.0917	.093	66.65	78.13	.676	.676	-8.394	17.500	14.496	167.573	
27	.0975	.099	67.11	78.07	.681	.678	-8.272	17.622	14.549	178.168	
28	.1046	.107	67.97	77.85	.689	.687	-8.046	17.846	14.740	191.138	
29	.1114	.114	68.44	77.60	.694	.697	-7.924	17.970	14.954	203.561	
30	.1179	.120	69.21	77.40	.702	.705	-7.720	18.174	15.121	215.435	
31	.1249	.127	69.65	77.32	.706	.708	-7.508	18.288	15.193	228.223	
32	.1319	.134	70.22	77.29	.712	.710	-7.456	18.438	15.223	241.010	
33	.1469	.152	71.46	76.95	.725	.723	-7.131	18.762	15.509	272.066	
34	.1663	.169	72.56	76.52	.736	.741	-6.835	19.056	15.884	303.852	
35	.1836	.187	73.81	76.29	.749	.750	-6.622	19.382	16.078	335.456	
36	.2017	.205	74.70	76.10	.757	.757	-6.260	19.614	16.243	368.521	
37	.2187	.223	75.88	75.52	.769	.764	-5.969	19.924	16.392	399.577	
38	.2369	.241	76.69	75.60	.778	.777	-5.758	20.136	16.672	432.825	
39	.2536	.258	77.77	75.32	.789	.789	-5.472	20.421	16.912	463.332	
40	.2717	.277	78.75	75.25	.799	.791	-5.216	20.677	16.974	496.397	
41	.2887	.294	79.37	74.90	.805	.805	-5.053	20.841	17.273	527.453	
42	.3070	.313	80.50	74.67	.816	.815	-4.756	21.138	17.471	560.884	
43	.3547	.361	82.55	74.24	.837	.832	-4.219	21.675	17.843	648.022	
44	.4025	.410	84.81	73.81	.860	.849	-3.625	22.269	18.208	735.343	
45	.4505	.459	86.71	73.27	.879	.871	-3.126	22.768	18.669	823.030	
46	.4990	.506	88.45	72.96	.897	.883	-2.670	23.224	18.937	911.630	
47	.5471	.557	90.19	72.55	.915	.900	-2.180	23.683	19.291	999.499	
48	.5949	.606	91.73	72.30	.930	.910	-1.807	24.087	19.507	1086.820	
49	.6426	.655	93.05	71.96	.944	.923	-1.460	24.434	19.799	1173.959	
50	.6909	.704	94.41	71.44	.957	.944	-1.103	24.790	20.240	1262.193	
51	.7388	.753	95.44	71.24	.968	.952	-0.834	25.059	20.415	1349.697	
52	.7869	.802	96.48	70.92	.978	.965	-0.562	25.332	20.689	1437.567	
53	.8345	.850	97.41	70.65	.985	.976	-0.395	25.498	20.921	1524.522	
54	.8826	.899	97.72	70.51	.991	.981	-0.235	25.659	21.041	1612.392	
55	.9305	.948	98.04	70.31	.994	.989	-0.151	25.743	21.214	1699.896	
56	.9791	.997	98.31	70.24	.997	.992	-0.060	25.814	21.272	1788.678	
57	1.0267	1.046	98.46	70.15	.999	.995	-0.035	25.859	21.348	1875.634	
58	1.0748	1.095	98.57	70.13	1.000	.996	-0.013	25.892	21.368	1963.503	
59	1.1227	1.144	98.60	70.07	1.000	.999	-0.003	25.891	21.417	2051.007	
60	1.1707	1.192	98.62	70.03	1.000	1.000	-0.002	25.895	21.456	2138.694	
61	1.2189	1.242	98.62	70.04	1.000	1.000	-0.001	25.894	21.448	2226.746	
62	1.2669	1.290	98.64	70.05	1.000	1.000	-0.007	25.900	21.433	2314.432	
63	1.3143	1.339	98.66	70.02	1.000	1.001	-0.004	25.890	21.466	2401.023	
64	1.3629	1.388	98.75	70.02	1.000	1.001	-0.035	25.928	21.463	2489.806	
65	1.4108	1.437	98.57	70.03	1.000	1.000	-0.011	25.882	21.453	2577.309	
66	1.4583	1.485	98.60	70.00	1.000	1.000	-0.005	25.889	21.483	2664.083	
67	1.5067	1.535	98.61	70.04	1.000	1.000	-0.013	25.893	21.443	2752.500	
68	1.8636	1.898	98.57	70.03	1.000	1.000	-0.021	25.872	21.466	4057.203	
69	2.2209	2.262	98.53	70.02	.999	1.000	-0.049	25.844	21.503	4709.737	
70	2.2578	2.626	98.43	69.97	.998	1.000	-0.038	25.856	21.456	5361.541	
71	2.9349	2.989	98.47	69.93	.998	1.000	-0.062	25.632	21.533	6013.710	
72	2.2919	3.353	98.38	69.94	.998	1.000	-0.052	25.841	21.571	6666.610	
73	3.6493	3.717	98.41	69.89	.998	1.000	-0.041	25.852	21.556	7319.326	
74	4.0066	4.081	98.46	69.91	.998	1.000	-0.041	25.852			

Table 27.

JOB KLD48 TAPE 3166R- FILES 117-137, RUNS 8.01-8.21 04/05/79

RUN NO. 8. POINT 18. GRID NO. 1

BOUNDARY LAYER PROPERTIES

LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO $y+=35$
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FREE STREAM VELOCITY =	98.671	98.671
FREE STREAM TEMPERATURE =	69.947	
WALL TEMPERATURE =	95.560	
WALL HEAT FLUX =	.07697	
FREE STREAM DENSITY =	.67636	
FREE STREAM KINEMATIC VISCOSITY =	.0001601	
DENSITY OF FLUID AT WALL =	.07284	
KINEMATIC VISCOSITY OF FLUID AT WALL =	.0001740	
WALL/FREE STREAM DENSITY RATIO =	.95387	
LOCATION REYNOLDS NUMBER (REX) =	3918913.37	
INPUT VALUE OF VELOCITY DELTA =	1.20000	
INPUT VALUE OF TEMPERATURE DELTA =	1.50000	
CALCULATED DELTA =		1.10966
DELTA 99.5% INPUT =	.00000	
DISPLACEMENT THICKNESS (DELSTAR) =	.16027	.16044
MOMENTUM THICKNESS (THETA) =	.11264	.11274
ENERGY-DISSIPATION THICKNESS =	.19996	.19998
ENTHALPY THICKNESS =	.00589	.00589
SHAPE FACTOR 12 (DELSTAR/THETA) =	1.42280	1.42310
SHAPE FACTOR 32 (ENERGY/THETA) =	1.77521	1.77379
MOMENTUM THICKNESS REYNOLDS NUMBER =	5785.48	5790.51
DISPLACEMENT THICKNESS REYNOLDS NUMBER =	8231.60	8240.50
SKIN FRICTION COEFFICIENT =	.002786	
FRICTION VELOCITY =	3.77084	
LAW OF THE WALL CONSTANT (K) =	.41000	
LAW OF THE WALL CONSTANT (C) =	5.00000	
WAKE STRENGTH =		.53787
CLAUSERS 'DELTA' INTEGRAL =	-3.91339	-4.04434
CLAUSERS 'G' INTEGRAL =	27.71205	27.76016
DISPLACEMENT THICKNESS - CONSTANT DENSITY =	.15197	.15456
MOMENTUM THICKNESS - CONSTANT DENSITY =	.11391	.11402
SHAPE FACTOR 12 - CONSTANT DENSITY =	1.33410	1.35559

LOCATION -X- 76.30000

Z = CENTERLINE

Table 28.

JOB KLD48 TAPE 3166R- FILES 117-137, RUNS 8.01-8.21 04/05/79
 RUN NO. 8. POINT 18. GRID NO. 1

REDUCED PROFILE DATA

N	Y INCHES	Y/	U	T	U/UE	THETA	U-UE	UTAU	U(+)	T(+)	Y(+)
1	.0048	.004	30.26	88.89	.307	.260	-18.143	8.023	5.710	8.721	
2	.0058	.005	33.35	87.92	.338	.298	-17.324	8.843	6.544	10.527	
3	.0068	.006	36.75	86.83	.372	.341	-16.421	9.746	7.477	12.332	
4	.0078	.007	40.22	86.11	.408	.369	-15.502	10.665	8.089	14.138	
5	.0088	.008	42.95	85.72	.435	.384	-14.777	11.390	8.429	15.944	
6	.0107	.010	46.26	84.96	.469	.414	-13.894	12.273	9.079	19.374	
7	.0122	.011	48.20	84.24	.495	.449	-13.203	12.783	9.693	22.083	
8	.0128	.012	48.89	84.07	.511	.465	-12.789	13.378	10.209	23.166	
9	.0148	.013	50.44	83.64	.525	.485	-12.432	13.735	10.641	26.777	
10	.0171	.015	51.79	83.13	.536	.497	-12.130	14.037	10.901	30.930	
11	.0207	.019	52.93	82.83	.540	.507	-12.042	14.125	11.110	34.541	
12	.0224	.020	54.13	82.59	.549	.516	-11.811	14.356	11.324	37.430	
13	.0240	.022	54.77	82.23	.555	.520	-11.642	14.525	11.615	40.500	
14	.0261	.024	55.16	81.74	.559	.539	-11.538	14.629	11.833	43.389	
15	.0261	.025	55.90	81.46	.567	.550	-11.343	14.824	12.075	47.181	
16	.0296	.027	56.21	81.39	.570	.555	-11.261	14.905	12.173	50.792	
17	.0358	.029	57.64	80.98	.584	.569	-10.882	15.285	12.482	53.500	
18	.0426	.039	59.24	80.48	.600	.589	-10.456	15.709	12.918	64.695	
19	.0558	.045	60.46	80.21	.613	.599	-10.134	16.033	13.147	77.334	
20	.0629	.057	61.45	79.96	.623	.609	-9.871	16.296	13.359	91.057	
21	.0761	.063	62.40	79.51	.632	.627	-9.620	16.547	13.747	100.807	
22	.0762	.069	64.07	79.22	.642	.638	-9.377	16.790	13.989	113.627	
23	.0832	.075	64.88	78.80	.656	.646	-9.176	16.991	14.167	126.627	
24	.0898	.081	65.54	78.68	.664	.654	-8.961	17.206	14.350	137.642	
25	.0961	.087	66.12	78.49	.670	.659	-8.787	17.380	14.457	150.281	
26	.1030	.093	66.72	78.34	.676	.667	-8.632	17.535	14.620	162.198	
27	.1102	.099	67.55	78.18	.685	.672	-8.474	17.693	14.751	173.573	
28	.1158	.104	67.93	78.03	.688	.678	-8.254	17.913	14.880	186.032	
29	.1222	.111	68.36	77.94	.693	.684	-8.052	18.015	15.009	199.032	
30	.1300	.117	69.19	77.80	.701	.688	-8.039	18.128	15.089	209.144	
31	.1470	.133	70.38	77.33	.713	.693	-7.817	18.350	15.207	221.783	
32	.1646	.148	71.44	77.10	.724	.712	-7.504	18.663	15.615	234.783	
33	.1824	.164	72.58	76.66	.736	.721	-7.221	18.946	15.808	265.479	
34	.2001	.180	73.80	76.40	.748	.738	-6.918	19.249	16.182	297.257	
35	.2171	.196	74.32	76.20	.753	.756	-6.596	19.570	16.408	329.397	
36	.2348	.212	75.38	76.11	.764	.759	-6.178	19.710	16.578	361.357	
37	.2524	.227	76.38	75.83	.774	.770	-5.912	19.989	16.653	392.052	
38	.2721	.243	77.36	75.58	.784	.780	-5.653	20.255	16.896	424.011	
39	.2870	.259	78.02	75.32	.791	.790	-5.476	20.514	17.108	455.790	
40	.3054	.275	78.85	75.08	.799	.800	-5.255	20.691	17.332	518.264	
41	.3566	.321	80.95	74.65	.820	.817	-4.700	21.466	17.540	551.487	
42	.4082	.368	83.05	74.10	.842	.838	-4.144	22.023	17.910	643.935	
43	.4602	.415	84.98	73.84	.861	.848	-3.630	22.537	18.376	737.104	
44	.5122	.462	86.92	73.38	.881	.866	-3.115	23.052	18.600	830.996	
45	.5641	.508	88.54	72.92	.897	.884	-2.687	23.479	19.388	924.887	
46	.6158	.555	90.27	72.48	.915	.901	-2.227	23.950	19.768	1018.599	
47	.6676	.602	91.92	72.02	.932	.919	-1.790	24.377	20.163	1205.479	
48	.7197	.649	93.13	71.74	.944	.930	-1.469	24.698	20.401	1299.551	
49	.7708	.695	94.26	71.37	.955	.944	-1.170	24.997	20.717	1391.818	
50	.8232	.742	95.49	71.15	.968	.953	-8.44	25.323	20.904	1486.432	
51	.8748	.788	96.33	70.85	.976	.965	-6.21	25.546	21.159	1579.601	
52	.9268	.835	97.09	70.61	.984	.974	-4.19	25.748	21.370	1673.493	
53	.9797	.882	97.59	70.48	.991	.979	-2.287	25.880	21.476	1767.746	
54	1.0307	.929	98.09	70.28	.994	.987	-1.154	26.013	21.653	1861.096	
55	1.0622	.975	98.31	70.18	.996	.991	-0.96	26.071	21.738	1954.065	
56	1.1343	1.022	98.47	70.06	.998	.996	-0.54	26.113	21.838	2046.157	
57	1.1858	1.069	98.60	70.05	.999	.996	-0.020	26.147	21.843	2141.146	
58	1.2382	1.116	98.68	70.00	1.000	.998	-0.03	26.170	21.892	2235.760	
59	1.2898	1.162	98.67	69.96	1.000	1.000	-0.02	26.165	21.923	226.929	
60	1.3421	1.208	98.67	69.95	1.000	1.000	-0.01	26.166	21.929	2423.363	
61	1.3936	1.256	98.74	69.92	1.000	1.001	-0.018	26.185	21.955	2516.352	
62	1.4452	1.302	98.82	69.96	1.000	1.000	-0.038	26.205	21.922	2609.521	
63	1.4968	1.349	98.67	70.01	1.000	1.000	-0.001	26.168	21.878	2702.691	
64	1.5491	1.396	98.65	69.91	1.000	1.002	-0.005	26.162	21.970	2797.124	
65	1.6008	1.443	98.72	69.87	1.000	1.003	-0.014	26.181	21.997	2890.474	
66	1.6531	1.490	98.66	69.91	1.000	1.001	-0.003	26.164	21.965	2984.907	
67	1.7054	1.537	98.69	69.89	1.000	1.002	-0.006	26.173	21.980	3079.341	
68	2.0335	1.832	98.60	69.84	0.999	1.004	-0.019	26.148	22.020	3670.858	
69	2.3622	2.129	98.57	69.81	0.999	1.005	-0.027	26.140	22.056	4265.265	
70	3.0190	2.424	98.60	69.90	0.998	1.002	-0.020	26.147	22.071	4857.505	
71	3.3477	3.017	98.44	69.89	0.998	1.005	-0.062	26.105	22.085	5451.189	
72	3.6758	3.313	98.42	69.82	0.997	1.005	-0.055	26.112	22.037	6044.693	
73	4.0050	3.609	98.45	69.84	0.998	1.004	-0.059	26.100	22.042	6637.114	
74								26.108	22.022	7231.520	

Table 28.

JOB KLD48 TAPE 3166R- FILES 117-137, RUNS 8.01-8.21 04/05/79

RUN NO. 8. POINT 20. GRID NO. 1

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO $y+=35$
FREE STREAM VELOCITY	= 98.533	98.533
FREE STREAM TEMPERATURE	= 69.564	
WALL TEMPERATURE	= 95.170	
WALL HEAT FLUX	= .07723	
FREE STREAM DENSITY	= .07641	
FREE STREAM KINEMATIC VISCOSITY	= .0001599	
DENSITY OF FLUID AT WALL	= .07289	
KINEMATIC VISCOSITY OF FLUID AT WALL	= .0001738	
WALL/FREE STREAM DENSITY RATIO	= .95385	
LOCATION REYNOLDS NUMBER (REX)	= 3918444.28	
INPUT VALUE OF VELOCITY DELTA	= 1.29000	
INPUT VALUE OF TEMPERATURE DELTA	= 1.29000	
CALCULATED DELTA	=	1.15058
DELTA 99.5% INPUT	= .00000	
DISPLACEMENT THICKNESS (DELSTAR)	= .16980	.17000
MOMENTUM THICKNESS (THETA)	= .11912	.11919
ENERGY-DISSIPATION THICKNESS	= .21112	.21110
ENTHALPY THICKNESS	= .00605	.00605
SHAPE FACTOR 12 (DELSTAR/THETA)	= 1.42545	1.42622
SHAPE FACTOR 32 (ENERGY/THETA)	= 1.77237	1.77110
MOMENTUM THICKNESS REYNOLDS NUMBER	= 6117.51	6121.30
DISPLACEMENT THICKNESS REYNOLDS NUMBER	= 8720.19	8730.34
SKIN FRICTION COEFFICIENT	= .002719	
FRICTION VELOCITY	= 3.72008	
LAW OF THE WALL CONSTANT (K)	= .41000	
LAW OF THE WALL CONSTANT (C)	= 5.00000	
WAKE STRENGTH	=	.59151
CLAUSERS 'DELTA' INTEGRAL	= -4.20931	-4.34254
CLAUSERS 'G' INTEGRAL	= 30.37478	30.45977
DISPLACEMENT THICKNESS - CONSTANT DENSITY	= .16134	.16395
MOMENTUM THICKNESS - CONSTANT DENSITY	= .12045	.12053
SHAPE FACTOR 12 - CONSTANT DENSITY	= 1.33939	1.36021

LOCATION -x- 76.30000
Z = -6 INCHES

Table 29.

JOB KLD48 TAPE 3166R- FILES 117-137, RUNS 8.01-8.21 04/05/79

RUN NO. 8. POINT 20. GRID NO. 1

REDUCED PROFILE DATA

N	Y INCHES	Y/ DEG.	U FT/SEC	T DEG.F	U/UE	THETA	U-UE	UTAU	U(+)	T(+)	Y(+)
1	.0048	.004	30.93	88.44	.314	.263	-18.172	8.315	5.674	8.614	
2	.0058	.005	33.45	87.55	.339	.298	-17.496	8.991	6.424	10.398	
3	.0068	.006	36.49	86.80	.370	.327	-16.679	9.808	7.057	12.181	
4	.0078	.007	39.42	86.06	.400	.356	-15.892	10.595	7.678	13.965	
5	.0082	.008	42.78	85.11	.434	.393	-14.987	11.500	8.476	16.462	
6	.0107	.009	45.08	84.63	.458	.411	-14.368	12.119	8.878	19.137	
7	.0118	.010	46.44	84.17	.471	.430	-14.044	12.483	9.270	21.099	
8	.0128	.011	47.52	83.62	.482	.451	-13.713	12.774	9.735	22.882	
9	.0148	.013	49.25	83.11	.500	.471	-13.247	13.240	10.158	26.449	
10	.0168	.015	50.57	82.66	.513	.488	-12.893	13.594	10.527	28.0417	
11	.0192	.017	51.66	82.46	.524	.496	-12.595	13.892	10.708	34.297	
12	.0207	.018	52.53	82.07	.533	.512	-12.367	14.120	11.037	35.972	
13	.0215	.019	52.79	81.84	.536	.521	-12.096	14.191	11.232	38.934	
14	.0244	.021	53.83	81.58	.546	.532	-11.868	14.469	11.452	43.571	
15	.0262	.023	54.38	81.55	.552	.532	-11.619	14.619	11.474	46.782	
16	.0283	.025	54.89	81.26	.557	.543	-11.371	14.756	11.722	50.527	
17	.0297	.026	55.21	81.12	.560	.549	-11.1645	14.841	11.843	53.024	
18	.036C	.021	56.93	80.58	.578	.570	-11.183	15.304	12.293	64.260	
19	.0433	.038	58.30	79.98	.592	.593	-10.816	15.671	12.795	77.280	
20	.050C	.043	59.42	79.68	.603	.605	-10.515	15.972	13.053	84.229	
21	.0565	.049	60.51	79.41	.614	.615	-10.220	16.266	13.279	100.822	
22	.0632	.055	61.37	79.28	.623	.621	-9.991	16.496	13.390	112.771	
23	.0702	.061	62.44	79.07	.634	.629	-9.701	16.786	13.565	125.256	
24	.0762	.066	63.03	78.80	.640	.639	-9.545	16.942	13.791	135.957	
25	.0831	.072	63.89	78.58	.648	.648	-9.313	17.174	13.982	148.263	
26	.0869	.076	64.66	78.45	.656	.653	-9.105	17.382	14.088	160.391	
27	.0959	.083	65.15	78.15	.661	.665	-8.975	17.512	14.343	171.092	
28	.1035	.090	66.02	77.94	.670	.673	-8.740	17.746	14.515	184.647	
29	.1102	.096	66.59	77.83	.676	.677	-8.587	17.900	14.614	196.597	
30	.1160	.101	67.66	77.74	.681	.681	-8.462	18.025	14.687	206.941	
31	.1228	.107	67.74	77.68	.687	.683	-8.279	18.208	14.739	219.069	
32	.1298	.113	68.22	77.37	.692	.695	-8.149	18.338	14.997	231.553	
33	.1473	.128	69.37	76.97	.704	.711	-7.838	18.648	15.339	262.765	
34	.1646	.143	70.49	76.88	.715	.714	-7.537	18.950	15.413	293.620	
35	.1816	.158	71.54	76.46	.726	.731	-7.256	19.231	15.763	324.296	
36	.2002	.174	72.72	76.13	.738	.744	-6.939	19.547	16.042	357.113	
37	.2169	.189	73.36	75.99	.744	.749	-6.783	19.704	16.164	386.897	
38	.235C	.204	74.42	75.80	.755	.756	-6.482	20.005	16.319	419.179	
39	.2522	.219	75.22	75.49	.763	.769	-6.268	20.219	16.582	449.855	
40	.2698	.235	76.16	75.28	.773	.777	-6.015	20.472	16.762	481.245	
41	.2869	.249	77.00	75.01	.781	.787	-5.788	20.698	16.986	511.743	
42	.3052	.265	77.73	74.98	.789	.788	-5.593	20.894	17.009	544.382	
43	.3566	.310	79.99	74.40	.812	.811	-4.985	21.502	17.497	636.054	
44	.4078	.354	81.96	73.98	.832	.828	-4.4555	22.532	17.857	727.370	
45	.46C4	.400	83.94	73.51	.852	.846	-3.923	22.564	18.251	821.183	
46	.5122	.445	85.76	73.02	.870	.865	-3.533	23.054	18.660	913.569	
47	.5636	.490	87.47	72.69	.888	.878	-2.974	23.513	18.942	1005.776	
48	.6158	.535	89.07	72.39	.904	.890	-2.544	23.943	19.196	1098.905	
49	.6677	.580	90.63	71.91	.920	.909	-2.125	24.362	19.603	1190.905	
50	.7197	.626	92.05	71.38	.934	.929	-1.424	24.745	20.047	1283.647	
51	.7710	.670	93.36	71.19	.947	.937	-1.391	25.096	20.208	1375.142	
52	.8231	.715	94.55	70.87	.960	.949	-1.070	25.417	20.479	1468.063	
53	.8751	.761	95.29	70.57	.967	.961	-873	25.614	20.725	1560.805	
54	.9272	.806	96.46	70.42	.979	.967	-5.559	25.926	20.858	1653.726	
55	.9790	.851	97.02	70.14	.985	.978	-4.08	26.079	21.094	1746.112	
56	1.0306	.896	97.56	69.95	.990	.985	-2.63	26.224	21.252	1838.141	
57	1.0823	.941	98.02	69.92	.995	.986	-1.373	26.350	21.276	1930.349	
58	1.1341	.986	98.22	69.73	.997	.994	-1.032	26.404	21.438	2022.735	
59	1.1863	1.031	98.42	69.67	.999	.996	-0.32	26.455	21.486	2115.834	
60	1.2381	1.076	98.41	69.59	1.000	1.000	-0.05	26.495	21.558	2230.0785	
61	1.2900	1.121	98.56	69.58	1.000	1.000	-0.05	26.492	21.566	2249.855	
62	1.3422	1.167	98.55	69.57	1.000	1.000	-0.05	26.492	21.589	2249.855	
63	1.3936	1.211	98.49	69.55	1.000	1.000	-0.05	26.474	21.589	2249.855	
64	1.4448	1.256	98.54	69.60	1.000	1.000	-0.03	26.490	21.547	2576.872	
65	1.4974	1.301	98.57	69.60	1.000	1.000	-0.03	26.497	21.549	2670.685	
66	1.5492	1.346	98.50	69.54	1.000	1.001	-0.09	26.478	21.593	2763.071	
67	1.6008	1.391	98.60	69.47	1.001	1.004	-0.17	26.504	21.652	2855.100	
68	1.6529	1.437	98.48	69.48	1.000	1.003	-0.14	26.473	21.645	2948.021	
69	1.7052	1.482	98.59	69.54	1.001	1.001	-0.16	26.503	21.593	3041.299	
70	2.0333	1.767	98.47	69.56	1.000	1.000	-0.17	26.470	21.580	3626.469	
71	2.3619	2.053	98.51	69.60	1.000	1.000	-0.08	26.479	21.543	4212.532	
72	2.6898	2.338	98.43	69.61	1.000	1.000	-0.08	26.459	21.538	4797.345	
73	3.0189	2.624	98.50	69.60	1.000	1.000	-0.08	26.479	21.543	5384.299	
74	3.3477	2.910	98.48	69.62	1.000	1.000	-0.08	26.473	21.533	5970.718	
75	3.6761	3.195	98.52	69.67	1.000	1.000	-0.03	26.484	21.491	6556.424	
76	4.0052	3.481	98.62	69.64	1.000	1.000	-0.023	26.510	21.510	7143.378	

Table 29.

JOB KLD48 TAPE 3166R- FILES 117-137, RUNS 8.01-8.21 04/05/79

RUN NO. 8. POINT 21. GRID NO. 1

BOUNDARY LAYER PROPERTIES

LINEAR INTERPOLATION	STANDARD SUBLAYER FUNCTION FROM TO WALL WALL TO $Y+ = 35$
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FREE STREAM VELOCITY =	98.700	98.700
FREE STREAM TEMPERATURE =	69.610	
WALL TEMPERATURE =	95.040	
WALL HEAT FLUX =	.07749	
FREE STREAM DENSITY =	.07641	
FREE STREAM KINEMATIC VISCOSITY =	.0001599	
DENSITY OF FLUID AT WALL =	.07290	
KINEMATIC VISCOSITY OF FLUID AT WALL =	.0001737	
WALL/FREE STREAM DENSITY RATIO =	.95416	
LOCATION REYNOLDS NUMBER (REX) =	4325652.75	
INPUT VALUE OF VELOCITY DELTA =	1.35000	
INPUT VALUE OF TEMPERATURE DELTA =	1.35000	
CALCULATED DELTA =		1.21086
DELTA 99.5% INPUT =	.00000	
DISPLACEMENT THICKNESS (DELSTAR) =	.17647	.17649
MOMENTUM THICKNESS (THETA) =	.12424	.12446
ENERGY-DISSIPATION THICKNESS =	.22074	.22089
ENTHALPY THICKNESS =	.00629	.00629
SHAPE FACTOR 12 (DELSTAR/THETA) =	1.42043	1.41801
SHAPE FACTOR 32 (ENERGY/THETA) =	1.77672	1.77482
MOMENTUM THICKNESS REYNOLDS NUMBER =	6390.26	6401.58
DISPLACEMENT THICKNESS REYNOLDS NUMBER =	9076.89	9077.50
SKIN FRICTION COEFFICIENT =	.002713	
FRICTION VELOCITY =	3.72160	
LAW OF THE WALL CONSTANT (K) =	.41000	
LAW OF THE WALL CONSTANT (C) =	5.00000	
WAKE STRENGTH =		.57251
CLAUSERS 'DELTA' INTEGRAL =	-4.33770	-4.51368
CLAUSERS 'G' INTEGRAL =	31.36304	31.20395
DISPLACEMENT THICKNESS - CONSTANT DENSITY =	.16687	.17019
MOMENTUM THICKNESS - CONSTANT DENSITY =	.12560	.12583
SHAPE FACTOR 12 - CONSTANT DENSITY =	1.32864	1.35258

LOCATION -X- 84.10001

Z = CENTERLINE

Table 30.

JOB KLD48 TAPE 3166R- FILES 117-137, RUNS 8.01-8.21 04/05/79

RUN NO. 8. POINT 21. GRID NO. 1

REDUCED PROFILE DATA

N	Y INCHES	Y/INCHES	U DELTA	FT/SEC	DEG.F	U/UE	THETA	U-UE	U(+) UTAU	T(+) TAU	Y(+) Y
1	.0066	.005	36.54	86.84	.370	.322	-16.701	9.819	6.887	11.834	
2	.0076	.006	38.40	86.17	.389	.349	-16.2C4	10.317	7.451	13.619	
3	.0088	.007	41.11	85.44	.417	.378	-15.474	11.047	8.070	15.761	
4	.0099	.008	42.93	84.74	.435	.405	-14.986	11.535	8.655	17.725	
5	.0109	.009	44.57	84.22	.452	.426	-14.545	11.975	9.094	19.510	
6	.0142	.010	46.73	83.90	.473	.438	-13.963	12.557	9.363	22.366	
7	.0151	.012	48.47	83.37	.491	.459	-13.497	13.024	9.807	25.400	
8	.0172	.014	50.72	82.72	.497	.470	-13.340	13.181	10.040	27.007	
9	.0190	.016	51.44	82.41	.514	.485	-12.892	13.629	10.356	30.755	
10	.0210	.017	52.60	82.06	.533	.497	-12.699	13.822	10.615	33.968	
11	.0224	.019	53.07	81.84	.538	.510	-12.387	14.133	10.908	37.538	
12	.0242	.020	53.78	81.72	.545	.524	-12.069	14.261	11.092	40.037	
13	.0256	.021	54.04	81.68	.547	.525	-12.001	14.452	11.195	43.250	
14	.0280	.023	54.78	81.24	.555	.543	-11.803	14.519	11.223	45.749	
15	.0297	.025	55.23	80.81	.560	.560	-11.681	14.840	11.958	50.033	
16	.0314	.026	55.72	80.66	.565	.565	-11.548	14.973	12.081	53.102	
17	.0377	.031	57.14	80.56	.579	.569	-11.167	15.354	12.169	56.137	
18	.0447	.037	58.31	80.06	.591	.589	-10.853	15.668	12.592	57.842	
19	.0517	.043	59.56	79.57	.604	.608	-10.512	16.009	12.996	59.233	
20	.0577	.048	60.75	79.31	.615	.619	-10.198	16.323	13.218	103.047	
21	.0645	.054	61.73	79.24	.625	.621	-9.933	16.588	13.280	115.899	
22	.0718	.059	62.65	78.91	.635	.634	-9.688	16.833	13.553	128.215	
23	.0779	.064	63.26	78.63	.641	.645	-9.523	16.998	13.793	139.103	
24	.0846	.070	64.23	78.36	.651	.656	-9.261	17.260	14.014	151.063	
25	.0916	.076	64.96	78.22	.658	.661	-9.067	17.454	14.131	163.558	
26	.0982	.081	65.69	78.08	.666	.667	-8.870	17.651	14.249	175.338	
27	.1052	.087	66.11	77.93	.670	.673	-8.756	17.765	14.377	187.833	
28	.1121	.093	66.86	77.83	.677	.677	-8.554	17.966	14.460	200.150	
29	.1178	.097	67.36	77.67	.682	.683	-8.421	18.100	14.596	210.324	
30	.1248	.103	67.83	77.56	.687	.687	-8.295	18.226	14.689	222.819	
31	.1321	.109	68.54	77.46	.694	.691	-8.104	18.417	14.777	235.849	
32	.1487	.123	69.56	77.09	.705	.706	-7.824	18.697	15.082	265.480	
33	.1665	.138	70.83	76.69	.718	.722	-7.489	19.031	15.418	297.253	
34	.1838	.152	71.94	76.38	.729	.734	-7.192	19.329	16.683	328.133	
35	.2020	.167	72.71	76.20	.737	.741	-6.982	19.538	15.832	360.619	
36	.2186	.181	73.60	76.12	.746	.744	-6.746	19.775	15.897	390.260	
37	.2368	.196	74.72	75.98	.757	.750	-6.445	20.076	16.027	422.737	
38	.2538	.210	75.40	75.61	.764	.764	-6.261	20.260	16.327	453.081	
39	.2716	.224	76.19	75.41	.772	.772	-6.049	20.472	16.498	484.854	
40	.2891	.239	76.82	75.08	.778	.785	-5.878	20.643	16.776	516.091	
41	.3072	.254	77.67	74.93	.787	.791	-5.650	20.870	16.901	548.399	
42	.3584	.296	79.80	74.50	.809	.808	-5.078	21.443	17.257	639.790	
43	.4098	.336	81.73	74.04	.828	.826	-4.561	21.960	17.647	731.538	
44	.4622	.382	83.85	73.62	.850	.842	-3.989	22.532	18.001	825.071	
45	.5137	.424	85.36	73.24	.865	.857	-3.585	22.935	18.321	916.997	
46	.5656	.467	86.79	72.82	.879	.874	-3.201	23.320	18.671	1009.638	
47	.6181	.510	88.46	72.42	.896	.890	-2.753	23.768	19.011	1103.349	
48	.6695	.553	89.91	72.12	.911	.901	-2.361	24.559	19.260	1195.097	
49	.7214	.596	91.39	71.81	.926	.913	-1.964	24.557	19.520	1287.737	
50	.7732	.639	92.70	71.54	.939	.924	-1.613	24.708	19.750	1380.199	
51	.8253	.682	93.81	71.19	.950	.938	-1.315	25.206	20.041	1473.197	
52	.8768	.724	94.90	70.89	.962	.949	-1.020	25.500	20.290	1565.123	
53	.9287	.767	95.79	70.60	.971	.961	-7.82	25.739	20.539	1657.763	
54	.9811	.810	96.50	70.35	.978	.971	-5.902	25.931	20.748	1751.296	
55	1.0324	.853	97.12	70.23	.984	.976	-4.223	26.097	20.852	1882.866	
56	1.0836	.895	97.59	70.04	.989	.983	-2.299	26.222	21.011	1934.256	
57	1.1360	.936	98.00	69.89	.993	.989	-1.087	26.334	21.134	2027.789	
58	1.1882	.981	98.31	69.83	.996	.991	-1.06	26.415	21.185	2120.965	
59	1.2401	1.024	98.44	69.75	.997	.995	-0.69	26.452	21.253	2213.606	
60	1.2918	1.067	98.59	69.66	.999	.998	-0.029	26.491	21.326	2305.889	
61	1.3436	1.110	98.73	69.64	1.000	1.000	-0.007	26.528	21.348	2398.351	
62	1.3954	1.152	98.67	69.62	1.000	1.000	-0.002	26.514	21.366	2490.813	
63	1.4471	1.195	98.72	69.63	1.000	1.000	-0.005	26.525	21.389	2583.096	
64	1.4992	1.238	98.71	69.57	1.000	1.001	-0.003	26.523	21.399	2676.094	
65	1.5509	1.281	98.76	69.59	1.000	1.001	-0.017	26.538	21.388	2768.377	
66	1.6029	1.324	98.66	69.62	1.000	1.000	-0.010	26.510	21.358	2861.196	
67	1.6552	1.367	98.73	69.65	1.000	1.000	-0.008	26.529	21.333	2954.550	
68	1.7070	1.410	98.77	69.60	1.000	1.000	-0.012	26.509	21.403	3632.307	
69	1.0349	1.461	98.65	69.57	1.000	1.000	-0.027	26.494	21.342	4219.029	
70	2.3636	1.4952	98.60	69.64	.999	.999	-0.034	26.486	21.323	4804.859	
71	2.6918	2.223	98.57	69.66	.999	.998	-0.057	26.464	21.361	5392.831	
72	3.0212	2.495	98.49	69.62	.998	.999	-0.037	26.484	21.342	5978.661	
73	3.3494	2.766	98.56	69.64	.999	.998	-0.040	26.481	21.337	6565.027	
74	3.6779	3.037	98.55	69.65	.998	.998	-0.025	26.496	21.318	7152.463	
75	4.0070	3.309	98.61	69.67	.999	.998					

Table 30.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79
 RUN NO. 7. POINT 3. GRID NO. 2

BOUNDARY LAYER PROPERTIES	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO $y^+=35$
FREE STREAM VELOCITY	99.054	99.054
FREE STREAM TEMPERATURE	68.469	
WALL TEMPERATURE	85.720	
WALL HEAT FLUX	.07878	
FREE STREAM DENSITY	.07612	
FREE STREAM KINEMATIC VISCOSITY	.0001602	
DENSITY OF FLUID AT WALL	.07371	
KINEMATIC VISCOSITY OF FLUID AT WALL	.0001696	
WALL/FREE STREAM DENSITY RATIO	.96837	
LOCATION REYNOLDS NUMBER (REX)	630497.87	
INPUT VALUE OF VELOCITY DELTA	.27500	
INPUT VALUE OF TEMPERATURE DELTA	.27500	
CALCULATED DELTA		.22989
DELTA 99.5% INPUT	.00000	
DISPLACEMENT THICKNESS (DELSTAR)	.03039	.03036
MOMENTUM THICKNESS (θ)	.02047	.02075
ENERGY-DISSIPATION THICKNESS	.03663	.03689
ENTHALPY THICKNESS	.00089	.00089
SHAPE FACTOR 12 (DELSTAR/ θ)	1.48439	1.46321
SHAPE FACTOR 32 (ENERGY/ θ)	1.78905	1.77759
MOMENTUM THICKNESS REYNOLDS NUMBER	1054.57	1068.95
DISPLACEMENT THICKNESS REYNOLDS NUMBER	1565.39	1564.10
SKIN FRICTION COEFFICIENT	.004522	
FRICTION VELOCITY	4.78608	
LAW OF THE WALL CONSTANT (K)	.41000	
LAW OF THE WALL CONSTANT (C)	5.00000	
WAKE STRENGTH		.07145
CLAUSERS 'DELTA' INTEGRAL	-.50645	-.60990
CLAUSERS 'G' INTEGRAL	3.79134	3.65445
DISPLACEMENT THICKNESS - CONSTANT DENSITY	.02699	.02947
MOMENTUM THICKNESS - CONSTANT DENSITY	.02065	.02094
SHAPE FACTOR 12 - CONSTANT DENSITY	1.30685	1.40748
LOCATION -X-	12.24000	
Z = CENTERLINE		

Table 31.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 3. GRID NO. 2

REDUCED PROFILE DATA

N	Y INCHES	Y/ DEG	U FT/SEC	T DEG.F	U/UE	THETA	UTAU	U(+)	T(+)	Y(+)
1	.005C	.022	46.20	79.26	.466	.374	-11.042	9.654	6.940	11.827
2	.0063	.028	51.13	78.42	.516	.423	-10.014	10.682	7.847	14.884
3	.0071	.031	54.07	78.07	.546	.444	-9.399	11.298	8.227	16.765
4	.0080	.035	56.75	77.67	.573	.467	-8.840	11.857	8.651	18.881
5	.0098	.043	61.17	76.88	.618	.512	-7.915	12.782	9.498	23.113
6	.0110	.048	62.46	76.56	.631	.531	-7.365	13.050	9.841	25.935
7	.0123	.054	63.80	76.23	.644	.550	-7.024	13.331	10.197	28.991
8	.0140	.061	65.44	75.86	.661	.572	-6.706	13.672	10.600	32.988
9	.0164	.071	66.96	75.50	.676	.593	-6.550	13.990	11.003	38.671
10	.0180	.076	67.70	75.24	.684	.607	-6.436	14.146	11.262	42.393
11	.0199	.087	68.74	74.99	.694	.622	-6.333	14.363	11.529	46.861
12	.0213	.093	69.28	74.85	.699	.630	-6.221	14.476	11.683	50.153
13	.0233	.101	70.05	74.70	.707	.639	-6.061	14.636	11.847	54.855
14	.0252	.110	71.01	74.53	.717	.648	-5.860	14.837	12.022	59.323
15	.0270	.118	71.54	74.36	.722	.659	-5.749	14.947	12.213	63.555
16	.0289	.126	71.98	74.16	.727	.670	-5.656	15.040	12.420	68.022
17	.0353	.154	74.01	73.77	.747	.692	-5.232	15.464	12.839	83.070
18	.0422	.184	76.10	73.34	.768	.718	-4.795	15.901	13.309	99.294
19	.0491	.214	78.13	72.96	.789	.740	-4.372	16.324	13.719	115.518
20	.0553	.241	79.44	72.69	.802	.755	-4.098	16.598	14.003	130.096
21	.0624	.272	81.50	72.31	.823	.777	-3.668	17.028	14.410	146.790
22	.0691	.301	82.74	72.05	.835	.792	-3.408	17.288	14.689	162.543
23	.0751	.327	84.05	71.77	.849	.809	-3.135	17.562	14.994	176.651
24	.0821	.357	85.54	71.59	.864	.819	-2.824	17.873	15.182	193.110
25	.0895	.389	86.94	71.22	.878	.841	-2.531	18.166	15.588	210.509
26	.0953	.415	88.01	71.05	.888	.850	-2.308	18.386	15.768	224.3147
27	.1026	.446	89.26	70.80	.901	.865	-2.046	18.650	16.031	241.311
28	.1094	.476	90.27	70.60	.911	.876	-1.836	18.861	16.250	257.300
29	.1152	.501	91.19	70.37	.921	.890	-1.642	19.054	16.498	270.937
30	.1221	.531	92.08	70.25	.930	.897	-1.458	19.239	16.632	287.161
31	.1293	.563	93.05	70.15	.939	.903	-1.255	19.442	16.739	304.090
32	.1462	.636	94.87	69.66	.958	.931	-0.873	19.823	17.266	343.826
33	.1638	.713	96.30	69.32	.972	.951	-0.575	20.021	17.627	3805.209
34	.1810	.787	97.31	69.04	.982	.967	-0.364	20.333	17.928	4225.651
35	.1992	.867	98.07	68.82	.990	.980	-0.205	20.491	18.165	468.444
36	.2162	.941	98.59	68.71	.995	.986	-0.098	20.598	18.282	508.415
37	.2341	1.018	98.75	68.63	.997	.991	-0.065	20.632	18.368	550.503
38	.2512	1.093	98.91	68.54	.999	.996	-0.031	20.666	18.461	590.710
39	.2694	1.172	99.05	68.48	1.000	1.000	-0.012	20.695	18.532	633.503
40	.2862	1.245	99.03	68.47	1.000	1.000	-0.006	20.691	18.536	673.004
41	.3040	1.322	99.04	68.47	1.000	1.000	-0.003	20.694	18.545	714.857
42	.3339	1.453	99.09	68.47	1.000	1.000	-0.008	20.705	18.540	785.160
43	.3642	1.584	99.14	68.46	1.001	1.001	-0.018	20.714	18.552	856.403
44	.3941	1.714	99.02	68.45	1.000	1.001	-0.008	20.688	18.558	926.706
45	.4243	1.846	99.03	68.45	1.000	1.001	-0.006	20.690	18.560	997.715
46	.4541	1.975	99.00	68.45	.999	1.000	-0.012	20.684	18.557	1067.783
47	.4841	2.106	99.00	68.42	.999	1.000	-0.017	20.684	18.588	1138.321
48	.5140	2.236	98.97	68.45	.999	1.000	-0.013	20.684	18.563	1208.624
49	.5440	2.366	98.99	68.40	.999	1.000	-0.019	20.677	18.611	1279.162
50	.5744	2.499	98.96	68.42	.999	1.000	-0.017	20.679	18.591	1350.640
51	.6042	2.628	98.97	68.43	.999	1.002	-0.032	20.664	18.579	1420.708
52	.68040	3.497	98.90	68.44	.998	1.000	-0.032	20.665	18.568	1490.492
53	1.0042	4.368	98.90	68.44	.998	1.002	-0.049	20.647	18.545	2031.000
54	1.2040	5.237	98.82	68.46	.998	1.000	-0.047	20.649	18.569	2331.255
55	1.4040	6.107	98.83	68.44	.998	1.002	-0.053	20.643	18.568	3771.509
56	1.6040	6.977	98.80	68.44	.997	1.001	-0.057	20.639	18.568	4242.468
57	1.8040	7.849	98.78	68.45	.997	1.001	-0.091	20.606	18.623	4712.017
58	2.0040	8.717	98.62	68.39	.996	1.004	-0.080	20.616	18.563	5182.977
59	2.2040	9.588	98.67	68.45	.996	1.001	-0.089	20.603	18.575	5652.995
60	2.4042	10.458	98.61	68.44	.995	1.002	-0.089	20.608	18.575	6122.779
61	2.6040	11.327	98.63	68.44	.996	1.002	-0.089	20.608	18.575	

Table 31.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 4. GRID NO. 2

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION	STANDARD SUBLAYER FUNCTION FROM TO WALL WALL TO Y+=35
FREE STREAM VELOCITY	= 98.341	98.341
FREE STREAM TEMPERATURE	= 68.480	
WALL TEMPERATURE	= 85.320	
WALL HEAT FLUX	= .07820	
FREE STREAM DENSITY	= .07710	
FREE STREAM KINEMATIC VISCOSITY	= .0001582	
DENSITY OF FLUID AT WALL	= .07472	
KINEMATIC VISCOSITY OF FLUID AT WALL	= .0001673	
WALL/FREE STREAM DENSITY RATIO	= .96910	
LOCATION REYNOLDS NUMBER (REX)	= 633986.73	
INPUT VALUE OF VELOCITY DELTA	= .27500	
INPUT VALUE OF TEMPERATURE DELTA	= .31000	
CALCULATED DELTA		.22893
DISPLACEMENT THICKNESS (DELSTAR)	= .00000	
MOMENTUM THICKNESS (THETA)	= .03026	.03019
ENERGY-DISSIPATION THICKNESS	= .02030	.02064
ENTHALPY THICKNESS	= .03637	.03670
SHAPE FACTOR 12 (DELSTAR/THETA)	= 1.49041	1.46229
SHAPE FACTOR 32 (ENERGY/THETA)	= 1.79116	1.77780
MOMENTUM THICKNESS REYNOLDS NUMBER	= 1051.65	1069.30
DISPLACEMENT THICKNESS REYNOLDS NUMBER	= 1567.39	1563.63
SKIN FRICTION COEFFICIENT	= .004526	
FRICITION VELOCITY	= 4.75208	
LAW OF THE WALL CONSTANT (K)	= .41000	
LAW OF THE WALL CONSTANT (C)	= 5.00000	
WAKE STRENGTH		.06966
CLAUSERS 'DELTA' INTEGRAL	= -4.9354	-6.633
CLAUSERS 'G' INTEGRAL	= 3.81335	3.67873
DISPLACEMENT THICKNESS - CONSTANT DENSITY	= .02661	.02730
MOMENTUM THICKNESS - CONSTANT DENSITY	= .02047	.02033
SHAPE FACTOR 12 - CONSTANT DENSITY	= 1.29985	1.40687

LOCATION -X- 12.24000

Z = CENTER 'E'

Table 32.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 4. GRID NO. 2

REDUCED PROFILE DATA

N	Y/ INCHES	Y/ FT/SEC	U DEG.F	U/UE	THETA	UTAU	U(+)	T(+)	Y(+)
1	.0055	48.53	78.61	.493	.398	-10.483	10.212	7.311	13.093
2	.0071	53.84	77.68	.547	.454	-9.369	11.330	8.324	16.881
3	.0077	55.62	77.43	.566	.469	-8.990	11.704	8.603	18.302
4	.0087	58.13	77.07	.591	.490	-8.462	12.233	8.994	20.670
5	.0103	61.40	76.56	.624	.520	-7.773	12.921	9.543	24.458
6	.0119	63.30	76.14	.644	.545	-7.374	13.530	10.004	28.246
7	.0129	64.30	75.95	.654	.557	-7.164	13.530	10.214	30.614
8	.0145	65.20	75.67	.663	.573	-6.973	13.721	10.513	34.402
9	.0169	66.89	75.21	.680	.600	-6.619	14.075	11.318	40.085
10	.0185	67.62	74.92	.688	.618	-6.465	14.229	11.332	43.873
11	.0204	68.52	74.87	.698	.620	-6.255	14.439	11.384	48.371
12	.0221	69.24	74.67	.704	.632	-6.126	14.571	11.606	52.396
13	.0241	70.01	74.48	.712	.644	-5.963	14.732	11.812	57.132
14	.0259	70.61	74.34	.718	.652	-5.836	14.858	11.963	61.393
15	.0261	71.48	74.17	.727	.662	-5.652	15.043	12.147	66.602
16	.0294	71.79	74.07	.730	.668	-5.587	15.108	12.254	69.680
17	.0355	73.74	73.66	.750	.693	-5.176	15.518	12.710	84.123
18	.0429	75.86	73.19	.771	.720	-4.731	15.963	13.213	101.644
19	.0501	77.84	72.83	.792	.742	-4.314	16.380	13.615	118.691
20	.0560	79.16	72.62	.807	.754	-3.990	16.705	13.844	132.660
21	.0626	80.90	72.23	.823	.777	-3.671	17.023	14.263	148.760
22	.0697	82.43	71.95	.838	.794	-3.349	17.345	14.571	165.097
23	.0759	83.66	71.76	.851	.805	-3.090	17.605	14.781	179.777
24	.0829	85.10	71.55	.865	.818	-2.786	17.908	15.004	196.350
25	.0901	86.42	71.19	.879	.839	-2.509	18.189	15.399	213.397
26	.0955	87.46	71.07	.889	.846	-2.290	18.405	15.526	226.183
27	.1025	88.61	70.88	.901	.858	-2.047	18.647	15.737	242.756
28	.1099	89.80	70.59	.913	.875	-1.798	18.896	16.051	260.277
29	.1157	90.65	70.46	.922	.883	-1.618	19.077	16.196	274.009
30	.1225	91.61	70.27	.932	.894	-1.416	19.278	16.399	290.110
31	.1295	92.45	70.06	.940	.906	-1.241	19.454	16.631	306.683
32	.1465	94.33	69.63	.959	.932	-0.844	19.851	17.098	346.933
33	.1643	95.71	69.29	.973	.952	-0.555	20.140	17.464	389.078
34	.1818	96.71	69.07	.983	.965	-0.344	20.351	17.704	430.512
35	.1995	97.42	68.93	.991	.973	-0.193	20.501	17.859	472.419
36	.2165	97.87	68.74	.995	.985	-0.099	20.595	18.069	512.670
37	.2346	98.09	68.64	.997	.990	-0.052	20.642	18.172	555.524
38	.2521	98.20	68.57	.999	.995	-0.030	20.665	18.253	596.958
39	.2699	98.30	68.54	1.000	.997	-0.018	20.686	18.288	639.103
40	.2865	98.27	68.50	.999	.999	-0.014	20.680	18.323	678.406
41	.3049	98.35	68.50	1.000	.999	-0.002	20.696	18.330	721.971
42	.3343	98.40	68.50	1.001	.999	-0.013	20.707	18.326	791.580
43	.3645	98.31	68.48	1.000	1.000	-0.006	20.689	18.355	863.084
44	.3947	98.27	68.46	.999	1.001	-0.015	20.680	18.371	934.587
45	.4247	98.41	68.50	1.001	.999	-0.015	20.709	18.323	1005.617
46	.4551	98.32	68.48	1.000	1.000	-0.014	20.691	18.346	1077.594
47	.4845	98.39	68.47	1.001	1.000	-0.011	20.705	18.357	1147.203
48	.5146	98.26	68.49	.999	1.000	-0.014	20.681	18.335	1218.469
49	.5452	98.33	68.49	1.000	1.000	-0.012	20.693	18.344	1290.920
50	.5745	98.33	68.48	1.000	1.000	-0.002	20.693	18.355	1360.292
51	.6045	98.24	68.48	.999	1.000	-0.021	20.674	18.354	1431.322
52	.6350	98.25	68.53	.999	.997	-0.019	20.675	18.293	1906.038
53	1.0045	98.16	68.52	.998	.998	-0.039	20.655	18.311	2378.387
54	1.2045	98.14	68.52	.998	.998	-0.043	20.652	18.311	2851.919
55	1.4045	98.09	68.54	.997	.996	-0.052	20.642	18.281	3325.451
56	1.6045	98.12	68.54	.998	.997	-0.046	20.646	18.287	3798.984
57	1.8045	98.09	68.53	.997	.997	-0.053	20.641	18.299	4272.516
58	2.0045	98.03	68.54	.997	.996	-0.065	20.629	18.281	4746.048
59	2.2045	97.94	68.54	.996	.996	-0.064	20.610	18.286	5219.580
60	2.4045	97.90	68.56	.996	.995	-0.093	20.602	18.262	5693.112
61	2.6045	97.88	68.54	.995	.997	-0.096	20.598	18.287	6166.645

Table 32.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 5. GRID NO. 2

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	SUBLAYER FUNCTION FROM WALL TO $Y^+=35$	STANDARD
FREE STREAM VELOCITY	= 98.151		98.151
FREE STREAM TEMPERATURE	= 68.480		
WALL TEMPERATURE	= 85.340		
WALL HEAT FLUX	= .07806		
FREE STREAM DENSITY	= .07710		
FREE STREAM KINEMATIC VISCOSITY	= .0001582		
DENSITY OF FLUID AT WALL	= .07471		
KINEMATIC VISCOSITY OF FLUID AT WALL	= .0001673		
WALL/FREE STREAM DENSITY RATIO	= .96907		
LOCATION REYNOLDS NUMBER (REX)	= 632760.20		
INPUT VALUE OF VELOCITY DELTA	= .27500		
INPUT VALUE OF TEMPERATURE DELTA	= .27500		
CALCULATED DELTA			.23153
DELTA 99.5% INPUT	= .00000		
DISPLACEMENT THICKNESS (DELSTAR)	= .03150		.03139
MOMENTUM THICKNESS (THETA)	= .02108		.02144
ENERGY-DISSIPATION THICKNESS	= .03769		.03805
ENTHALPY THICKNESS	= .00088		.00088
SHAPE FACTOR 12 (DELSTAR/THETA)	= 1.49415		1.46438
SHAPE FACTOR 32 (ENERGY/THETA)	= 1.78825		1.77474
MOMENTUM THICKNESS REYNOLDS NUMBER	= 1089.70		1108.23
DISPLACEMENT THICKNESS REYNOLDS NUMBER	= 1628.17		1622.86
SKIN FRICTION COEFFICIENT	= .04436		
FRICITION VELOCITY	= 4.69556		
LAW OF THE WALL CONSTANT (K)	= .41000		
LAW OF THE WALL CONSTANT (C)	= 5.00000		
WAKE STRENGTH			.11278
CLAUSERS 'DELTA' INTEGRAL	= -.51815		-.63770
CLAUSERS 'G' INTEGRAL	= 4.09256		3.88274
DISPLACEMENT THICKNESS - CONSTANT DENSITY	= .02770		.03051
MOMENTUM THICKNESS - CONSTANT DENSITY	= .02125		.02162
SHAPE FACTOR 12 - CONSTANT DENSITY	= 1.30358		1.41100
LOCATION -X-	12.24000		
Z = +6 INCHES			

Table 33.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79
 RUN NO. 7. POINT 5. GRID NO. 2

REDUCED PROFILE DATA

N	Y INCHES	Y/ DELTA	U FT/SEC	T DEG.F	U/UE	THETA	U-UE	UTAU	U(+)	T(+)	Y(+)
1	.0058	.025	49.86	78.30	.508	.417	-10.284	10.619	7.592	13.638	
2	.0069	.030	52.11	77.75	.531	.450	-9.804	11.099	8.187	16.212	
3	.0078	.034	54.49	77.31	.555	.477	-9.298	11.605	8.666	18.317	
4	.0099	.039	57.55	76.89	.586	.501	-8.648	12.255	9.118	21.124	
5	.0099	.043	59.40	76.57	.605	.520	-8.252	12.651	10.458	23.230	
6	.0117	.051	61.80	76.02	.630	.553	-7.741	13.161	10.049	27.441	
7	.0126	.056	62.83	75.77	.640	.568	-7.522	13.381	10.327	30.248	
8	.0139	.060	63.87	75.62	.651	.576	-7.300	13.603	10.483	32.587	
9	.0159	.069	65.29	75.29	.665	.596	-6.998	13.905	10.838	37.266	
10	.0179	.077	66.41	75.06	.677	.610	-6.759	14.143	11.089	41.945	
11	.0199	.086	67.31	74.78	.686	.627	-6.569	14.334	11.394	46.623	
12	.0217	.094	68.22	74.57	.695	.639	-6.373	14.530	11.618	50.834	
13	.0235	.102	68.72	74.48	.700	.644	-6.268	14.634	11.709	55.045	
14	.0251	.109	69.41	74.34	.707	.652	-6.121	14.782	11.861	58.788	
15	.0266	.116	70.12	74.18	.714	.662	-5.969	14.934	12.036	62.765	
16	.0281	.126	70.77	74.02	.721	.671	-5.832	15.071	12.209	68.145	
17	.0307	.133	71.41	73.93	.728	.677	-5.694	15.208	12.307	71.888	
18	.0373	.161	73.36	73.54	.748	.700	-5.276	15.627	12.724	87.328	
19	.0443	.191	75.40	73.09	.768	.727	-4.846	16.057	13.217	103.703	
20	.0511	.221	77.01	72.71	.785	.749	-4.5C3	16.400	13.627	119.611	
21	.0569	.246	78.59	72.44	.801	.765	-4.165	16.738	13.917	133.179	
22	.0645	.279	80.34	72.09	.819	.786	-3.793	17.110	14.287	150.958	
23	.0715	.309	81.94	71.91	.835	.796	-3.452	17.451	14.482	167.334	
24	.0773	.334	83.06	71.73	.846	.807	-3.213	17.690	14.683	180.902	
25	.0839	.362	84.50	71.44	.861	.824	-2.907	17.996	14.991	196.342	
26	.0911	.394	85.84	71.15	.875	.842	-2.623	18.280	15.308	213.185	
27	.0971	.420	86.97	70.97	.886	.852	-2.381	18.522	15.495	222.221	
28	.1044	.451	88.06	70.82	.897	.861	-2.144	18.759	15.658	244.298	
29	.1111	.480	89.24	70.65	.909	.871	-1.898	19.005	15.843	259.972	
30	.1171	.506	90.02	70.37	.917	.888	-1.733	19.170	16.145	274.008	
31	.1243	.537	90.88	70.19	.926	.898	-1.549	19.354	16.337	290.851	
32	.1309	.565	91.81	70.09	.935	.905	-1.351	19.552	16.453	306.291	
33	.1485	.642	93.85	69.71	.956	.927	-0.915	19.988	16.859	347.464	
34	.1657	.716	95.36	69.40	.972	.945	-0.595	20.308	17.193	387.700	
35	.1830	.791	96.42	69.16	.982	.960	-0.369	20.534	17.451	#28.171	
36	.2009	.866	97.18	68.86	.990	.976	-0.206	20.697	17.751	470.045	
37	.2178	.941	97.67	68.71	.995	.986	-0.101	20.801	17.939	509.580	
38	.2361	1.020	97.84	68.65	.997	.990	-0.067	20.836	18.002	552.391	
39	.2528	1.092	97.97	68.57	.998	.995	-0.038	20.865	18.092	591.458	
40	.2712	1.171	98.13	68.50	1.000	.999	-0.005	20.898	18.164	634.502	
41	.2879	1.244	98.20	68.50	1.000	.999	-0.010	20.913	18.159	673.569	
42	.3061	1.322	98.13	68.49	1.000	.999	-0.004	20.899	18.172	716.145	
43	.3356	1.450	98.12	68.44	1.000	1.002	-0.006	20.897	18.226	785.156	
44	.3659	1.580	98.13	68.43	1.000	1.003	-0.005	20.898	18.241	856.038	
45	.3961	1.711	98.12	68.44	1.000	1.002	-0.008	20.899	18.227	926.866	
46	.4261	1.840	98.13	68.43	1.000	1.003	-0.012	20.891	18.225	996.867	
47	.4559	1.969	98.09	68.44	0.999	1.002	-0.012	20.891	18.226	1066.579	
48	.4859	2.099	98.05	68.44	0.999	1.002	-0.000	20.903	18.235	1136.760	
49	.5162	2.230	98.15	68.43	1.000	1.003	-0.000	20.903	18.235	1207.642	
50	.5465	2.360	98.07	68.42	0.999	1.004	-0.016	20.887	18.250	1278.524	
51	.5759	2.487	98.06	68.43	0.999	1.003	-0.019	20.883	18.242	1347.301	
52	.6062	2.618	98.03	68.44	0.999	1.002	-0.026	20.877	18.230	1418.184	
53	.8059	3.481	98.12	68.43	1.000	1.003	-0.007	20.896	18.238	1685.352	
54	1.0059	4.345	97.97	68.40	0.998	1.005	-0.039	20.864	18.268	2353.221	
55	1.2065	5.211	97.94	68.41	0.998	1.004	-0.045	20.857	18.256	2622.495	
56	1.4056	6.072	97.87	68.40	0.997	1.005	-0.060	20.843	18.268	3288.961	
57	1.6061	6.937	97.83	68.39	0.997	1.006	-0.067	20.836	18.286	3757.269	
58	1.8065	7.802	97.86	68.39	0.997	1.006	-0.058	20.845	18.287	4226.104	
59	2.0063	8.665	97.85	68.34	0.997	1.008	-0.065	20.838	18.334	4693.506	
60	2.2059	9.528	97.71	68.36	0.995	1.007	-0.094	20.809	18.310	5160.440	
61	2.4059	10.391	97.83	68.36	0.997	1.007	-0.068	20.835	18.317	5628.310	
62	2.6063	11.257	97.81	68.32	0.997	1.009	-0.073	20.830	18.353	6097.116	

Table 33.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 6. GRID NO. 2

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO $y+=35$
FREE STREAM VELOCITY =	98.114	98.114
FREE STREAM TEMPERATURE =	68.668	
WALL TEMPERATURE =	85.470	
WALL HEAT FLUX =	.07836	
FREE STREAM DENSITY =	.07707	
FREE STREAM KINEMATIC VISCOSITY =	.0001583	
DENSITY OF FLUID AT WALL =	.07469	
KINEMATIC VISCOSITY OF FLUID AT WALL =	.0001673	
WALL/FREE STREAM DENSITY RATIO =	.96918	
LOCATION REYNOLDS NUMBER (REX) =	632128.13	
INPUT VALUE OF VELOCITY DELTA =	.29000	
INPUT VALUE OF TEMPERATURE DELTA =	.29000	
CALCULATED DELTA =		.22176
DISPLACEMENT THICKNESS (DELSTAR) =	.00000	
MOMENTUM THICKNESS (THETA) =	.03000	.02940
ENERGY-DISSIPATION THICKNESS =	.01937	.02005
ENTHALPY THICKNESS =	.03481	.03562
SHAPE FACTOR 12 (DELSTAR/THETA) =	.00083	.00085
SHAPE FACTOR 32 (ENERGY/THETA) =	1.54932	1.46648
MOMENTUM THICKNESS REYNOLDS NUMBER =	1.79746	1.77636
DISPLACEMENT THICKNESS REYNOLDS NUMBER =	1000.12	1035.49
SKIN FRICTION COEFFICIENT =	1549.50	1518.52
FRICTION VELOCITY =	.004558	
LAW OF THE WALL CONSTANT (K) =	4.75784	
LAW OF THE WALL CONSTANT (C) =	.41000	
WAKE STRENGTH =	5.00000	.07033
CLAUSERS 'DELTA' INTEGRAL =	-.42982	-.58883
CLAUSERS 'G' INTEGRAL =	4.10347	3.54145
MOMENTUM THICKNESS - CONSTANT DENSITY =	.02501	.02855
SHAPE FACTOR 12 - CONSTANT DENSITY =	.01952	.02023
	1.28092	1.41174

LOCATION -X- 12.24000

Z = -6 INCHES

Table 34.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 6. GRID NO. 2

REDUCED PROFILE DATA

N	INCHES	Y/	U	T	U-UE	THETA	UTAU	U(+)	T(+)	Y(+)
1	.0083	.036	57.21	77.21	.583	.492	-8.597	12.025	8.995	19.737
2	.0098	.044	59.17	76.79	.603	.516	-8.184	12.437	9.443	23.291
3	.0107	.048	60.47	76.58	.616	.529	-7.912	12.710	9.677	25.423
4	.0118	.053	61.95	76.31	.631	.545	-7.601	13.021	10.158	28.030
5	.0126	.057	62.83	76.14	.640	.555	-7.345	13.206	10.423	29.925
6	.0142	.064	64.36	75.89	.656	.570	-7.094	13.528	10.678	33.716
7	.0157	.071	65.46	75.66	.667	.584	-6.858	13.763	10.807	37.270
8	.0165	.075	65.94	75.54	.672	.591	-6.762	13.860	11.088	39.166
9	.0185	.084	67.14	75.28	.684	.606	-6.509	14.112	11.332	43.905
10	.0207	.093	68.26	75.06	.696	.620	-6.276	14.526	11.556	49.117
11	.0226	.102	69.11	74.85	.704	.632	-6.095	14.642	11.717	53.619
12	.0241	.109	69.66	74.71	.710	.641	-5.980	14.770	11.793	57.173
13	.0253	.114	70.27	74.64	.716	.645	-5.852	14.953	11.978	60.016
14	.0277	.125	71.15	74.47	.725	.655	-5.668	15.074	12.112	65.703
15	.0293	.132	71.72	74.34	.731	.662	-5.548	15.212	12.283	69.494
16	.0313	.141	72.38	74.19	.738	.672	-5.410	15.328	12.417	74.233
17	.0331	.149	72.93	74.06	.743	.679	-5.294	15.777	12.866	78.498
18	.0345	.178	75.07	73.65	.765	.703	-4.845	16.202	13.326	93.662
19	.0464	.209	77.08	73.23	.786	.729	-4.420	16.591	13.827	110.010
20	.0538	.243	78.94	72.77	.805	.756	-4.031	16.898	14.146	127.544
21	.0595	.268	80.40	72.47	.819	.773	-3.723	17.251	14.417	141.049
22	.0669	.302	82.06	72.23	.837	.788	-3.371	17.527	14.777	158.583
23	.0733	.331	83.79	71.89	.850	.808	-3.095	17.887	18.989	173.747
24	.0794	.358	84.63	71.70	.863	.820	-2.834	18.096	15.365	188.200
25	.0864	.390	86.10	71.35	.878	.840	-2.526	18.357	15.555	204.785
26	.0935	.422	87.34	71.18	.890	.851	-2.265	18.583	15.734	221.608
27	.0993	.448	88.41	71.02	.901	.860	-2.039	18.819	15.968	235.350
28	.1067	.481	89.54	70.80	.913	.873	-1.803	19.081	16.313	252.884
29	.1136	.512	90.78	70.48	.925	.892	-1.541	19.211	16.514	269.232
30	.1197	.540	91.40	70.30	.932	.903	-1.410	19.405	16.660	283.686
31	.1265	.571	92.33	70.16	.941	.911	-1.216	19.596	16.860	299.797
32	.1333	.601	93.24	69.98	.950	.922	-1.025	19.951	17.297	315.909
33	.1506	.679	94.93	69.58	.967	.946	-0.700	20.196	17.556	356.899
34	.1682	.759	96.09	69.34	.979	.960	-0.425	20.371	17.793	398.601
35	.1853	.836	96.92	69.12	.988	.973	-0.250	20.482	17.987	439.117
36	.2033	.917	97.45	68.94	.993	.984	-0.140	20.541	18.108	481.766
37	.2207	.995	97.73	68.83	.996	.987	-0.080	20.615	18.181	522.993
38	.2365	1.076	97.92	68.77	.998	.994	-0.041	20.581	18.224	565.168
39	.2555	1.152	98.08	68.73	1.000	.996	-0.007	20.624	18.251	605.447
40	.2736	1.234	98.12	68.70	1.000	.998	-0.002	20.631	18.262	648.333
41	.2904	1.310	98.16	68.69	1.000	.999	-0.010	20.615	18.299	688.139
42	.3083	1.390	98.09	68.66	1.000	1.001	-0.006	20.605	18.305	730.550
43	.3381	1.525	98.10	68.65	1.000	1.001	-0.003	20.618	18.332	801.158
44	.3685	1.662	98.15	68.66	1.000	1.001	-0.008	20.629	18.300	873.187
45	.3966	1.798	98.17	68.63	1.000	1.002	-0.011	20.633	18.328	944.505
46	.4267	1.933	98.05	68.62	1.000	1.003	-0.014	20.608	18.341	1015.824
47	.4587	2.069	98.15	68.64	1.000	1.002	-0.007	20.629	18.324	1086.905
48	.4887	2.204	98.13	68.64	1.000	1.002	-0.003	20.625	18.320	1157.986
49	.5185	2.338	98.10	68.64	1.000	1.001	-0.004	20.618	18.316	1228.594
50	.5484	2.473	98.04	68.65	1.000	1.001	-0.016	20.605	18.312	1299.438
51	.5788	2.610	98.18	68.64	1.000	1.002	-0.014	20.636	18.324	1371.467
52	.6085	2.744	98.04	68.65	1.000	1.001	-0.015	20.607	18.304	1441.836
53	.8084	3.646	98.01	68.69	.999	.999	-0.022	20.599	18.266	1915.477
54	1.0083	4.547	98.00	68.65	.999	1.001	-0.023	20.598	18.308	2389.116
55	1.2087	5.451	97.99	68.67	.999	1.000	-0.026	20.596	18.288	2863.939
56	1.4087	6.353	98.03	68.68	.999	1.000	-0.018	20.604	18.272	3337.815
57	1.6087	7.254	97.85	68.66	.997	1.000	-0.056	20.566	18.296	3811.690
58	1.8087	8.156	97.80	68.67	.997	1.000	-0.066	20.555	18.282	4285.566
59	2.0087	9.058	97.82	68.70	.997	.998	-0.361	20.560	18.259	4759.442
60	2.2087	9.960	97.87	68.71	.997	.998	-0.352	20.569	18.245	5233.318
61	2.4084	10.861	97.79	68.75	.997	.995	-0.369	20.553	18.203	5706.483
62	2.6087	11.764	97.72	68.73	.996	.996	-0.084	20.538	18.217	6181.069

Table 34.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 8. GRID NO. 2

BOUNDARY LAYER PROPERTIES

LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO $y=35$
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FREE STREAM VELOCITY	=	98.588	98.588
FREE STREAM TEMPERATURE	=	69.310	
WALL TEMPERATURE	=	89.660	
WALL HEAT FLUX	=	.07841	
FREE STREAM DENSITY	=	.07698	
FREE STREAM KINEMATIC VISCOSITY	=	.0001587	
DFNSITY OF FLUID AT WALL	=	.07412	
KINEMATIC VISCOSITY OF FLUID AT WALL	=	.0001696	
WALL/FREE STREAM DENSITY RATIO	=	.96296	
LOCATION REYNOLDS NUMBER (REX)	=	1459216.05	
INPUT VALUE OF VELOCITY DELTA	=	.62000	
INPUT VALUE OF TEMPERATURE DELTA	=	.90000	
CALCULATED DELTA	=		.49689
DELTA 99.5% INPUT	=	.00000	
DISPLACEMENT THICKNESS (DELSTAR)	=	.07321	.07316
MOMENTUM THICKNESS (THETA)	=	.05062	.05095
ENERGY-DISSIPATION THICKNESS	=	.09002	.09030
ENTHALPY THICKNESS	=	.00218	.00219
SHAPE FACTOR 12 (DELSTAR/THETA)	=	1.44617	1.43597
SHAPE FACTOR 32 (ENERGY/THETA)	=	1.77822	1.77246
MOMENTUM THICKNESS REYNOLDS NUMBER	=	2621.46	2638.17
DISPLACEMENT THICKNESS REYNOLDS NUMBER	=	3791.08	3788.34
SKIN FRICTION COEFFICIENT	=	.003373	
FRICTION VELOCITY	=	4.12588	
LAW OF THE WALL CONSTANT (K)	=	.41000	
LAW OF THE WALL CONSTANT (C)	=	5.00000	
WAKE STRENGTH	=		.41599
CLAUSERS 'DELTA' INTEGRAL	=	-1.53912	-1.69607
CLAUSERS 'G' INTEGRAL	=	11.39228	11.16593
DISPLACEMENT THICKNESS - CONSTANT DENSITY	=	.06773	.07098
MOMENTUM THICKNESS - CONSTANT DENSITY	=	.05109	.05142
SHAPE FACTOR 12 - CONSTANT DENSITY	=	1.32566	1.38029

LOCATION -X- 28.18001

Z = CENTERLINE

Table 35.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 8. GRID NO. 2

REDUCED PROFILE DATA

N	Y INCHES	Y/DELTA	U FT/SEC	T DEG.F	U/UE	THETA	UTAU	U(+)	T(+)	Y(+)
1	.0066	.013	43.17	81.73	.438	.390	-13.432	10.463	7.427	13.439
2	.0077	.016	45.32	81.02	.460	.425	-12.910	10.985	8.088	15.669
3	.0089	.018	48.17	80.48	.489	.451	-12.220	11.675	8.589	18.102
4	.0099	.020	50.26	80.28	.510	.461	-11.713	12.182	8.784	20.129
5	.0107	.022	51.76	80.02	.525	.474	-11.349	12.546	9.028	21.750
6	.0125	.025	54.02	79.43	.548	.503	-10.802	13.093	9.576	25.399
7	.0137	.026	55.16	79.31	.560	.509	-10.526	13.369	9.693	27.832
8	.0150	.030	55.98	79.00	.568	.524	-10.326	13.569	9.978	30.467
9	.0173	.035	57.66	78.56	.585	.546	-9.919	13.976	10.395	35.129
10	.0188	.038	58.45	78.28	.593	.559	-9.727	14.168	10.651	38.170
11	.0211	.043	59.42	78.10	.603	.568	-9.494	14.401	10.817	42.832
12	.0225	.045	60.06	77.99	.609	.573	-9.338	14.557	10.924	45.670
13	.0241	.049	60.63	77.81	.615	.582	-9.199	14.696	11.091	48.913
14	.0263	.053	61.13	77.57	.620	.594	-9.079	14.816	11.318	53.373
15	.0279	.056	61.74	77.42	.626	.601	-8.930	14.964	11.458	56.616
16	.0297	.060	62.20	77.27	.631	.609	-8.819	15.075	11.597	60.265
17	.0315	.063	62.80	77.14	.637	.615	-8.673	15.222	11.722	63.913
18	.0380	.077	64.37	76.74	.653	.635	-8.293	15.602	12.091	77.089
19	.0447	.090	65.91	76.41	.669	.651	-7.921	15.974	12.400	80.671
20	.0517	.104	67.22	76.07	.682	.668	-7.602	16.293	12.721	104.860
21	.0576	.117	68.38	75.76	.694	.683	-7.322	16.573	13.016	117.428
22	.0651	.131	69.33	75.52	.703	.695	-7.091	16.804	13.232	132.023
23	.0718	.145	70.67	75.38	.717	.702	-6.767	17.128	13.366	145.604
24	.0781	.157	71.50	75.12	.725	.714	-6.565	17.330	13.607	158.375
25	.0851	.171	72.46	74.89	.735	.726	-6.333	17.562	13.827	172.564
26	.0919	.185	73.46	74.78	.745	.731	-6.091	17.804	13.927	186.348
27	.0981	.197	74.43	74.57	.755	.742	-5.855	18.040	14.130	198.916
28	.1053	.212	75.09	74.36	.762	.752	-5.696	18.199	14.324	213.511
29	.1121	.226	75.82	74.21	.769	.759	-5.519	18.376	14.464	227.295
30	.1181	.238	76.78	74.10	.779	.764	-5.286	18.609	14.563	239.457
31	.1252	.252	77.46	73.96	.786	.772	-5.120	18.775	14.698	253.850
32	.1319	.266	78.21	73.82	.793	.778	-4.940	18.955	14.829	267.431
33	.1492	.300	80.08	73.45	.812	.796	-4.687	19.408	15.170	302.499
34	.1665	.335	81.79	73.10	.830	.814	-4.072	19.823	15.500	337.567
35	.1841	.371	83.47	72.76	.847	.830	-3.663	20.232	15.819	373.244
36	.2017	.406	84.98	72.45	.862	.846	-3.298	20.597	16.108	408.920
37	.219C	.441	86.31	72.12	.875	.862	-2.977	20.918	16.415	443.988
38	.237C	.477	87.81	71.81	.891	.877	-2.613	21.282	16.712	480.476
39	.2541	.511	88.97	71.58	.902	.889	-2.331	21.564	16.928	515.139
40	.2721	.548	90.14	71.29	.914	.903	-2.047	21.848	17.194	551.626
41	.2891	.582	91.51	71.03	.928	.916	-1.714	22.180	17.442	586.086
42	.3C71	.618	92.26	70.77	.936	.928	-1.535	22.360	17.684	622.573
43	.3365	.677	93.84	70.53	.952	.940	-1.150	22.745	17.910	682.169
44	.367C	.739	95.06	70.23	.964	.955	-0.851	23.044	18.192	743.994
45	.3968	.799	96.15	70.03	.975	.965	-0.592	23.303	18.377	804.401
46	.4269	.859	96.94	69.82	.983	.975	-0.398	23.497	18.572	865.416
47	.4567	.919	97.45	69.73	.989	.979	-0.275	23.620	18.654	925.822
48	.4869	.980	97.86	69.59	.993	.986	-0.176	23.719	18.791	987.040
49	.517C	1.041	98.12	69.48	.995	.991	-0.113	23.782	18.887	1048.054
50	.5467	1.100	98.35	69.47	.998	.992	-0.057	23.838	18.896	1108.258
51	.5767	1.161	98.43	69.43	.998	.994	-0.039	23.856	18.938	1169.070
52	.6071	1.222	98.50	69.37	.999	.997	-0.022	23.873	18.995	1230.693
53	.687C	1.624	98.59	69.30	1.000	1.000	0.001	23.896	19.053	1635.704
54	1.0C71	2.027	98.59	69.31	1.000	1.000	0.000	23.895	19.053	2041.520
55	1.2067	2.429	98.58	69.32	1.000	1.000	0.000	23.894	19.053	2446.123
56	1.4067	2.631	98.45	69.31	.999	1.000	-0.033	23.862	19.053	2851.536
57	1.6071	3.234	98.46	69.30	.999	1.000	-0.026	23.869	19.058	3257.760
58	1.8C70	3.637	98.41	69.31	.998	1.000	-0.043	23.852	19.053	3662.971
59	2.0067	4.039	98.40	69.32	.998	.999	-0.046	23.849	19.036	4067.776
60	2.2071	4.442	98.39	69.36	.998	.998	-0.047	23.848	19.006	4474.000
61	2.4073	4.845	98.36	69.36	.998	.998	-0.055	23.840	19.006	4879.819
62	2.6067	5.246	98.35	69.39	.998	.998	-0.057	23.838	18.973	5284.016

Table 35.

JCB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 9. GRID NO. 2

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO $\gamma+ = 35$
FREE STREAM VELOCITY =	98.385	98.385
FREE STREAM TEMPERATURE =	69.540	
WALL TEMPERATURE =	89.900	
WALL HEAT FLUX =	.07775	
FREE STREAM DENSITY =	.0001568	
FREE STREAM KINEMATIC VISCOSITY =	.07409	
DENSITY OF FLUID AT WALL =	.0001697	
KINEMATIC VISCOSITY OF FLUID AT WALL =	.96295	
WALL/FREE STREAM DENSITY RATIO =	1455089.11	
LOCATION REYNOLDS NUMBER (REX) =	.70000	
INPUT VALUE OF VELOCITY DELTA =	.90000	
INPUT VALUE OF TEMPERATURE DELTA =		.50677
CALCULATED DELTA =		
DISPLACEMENT THICKNESS (DELSTAR) =	.00000	.07505
MOMENTUM THICKNESS (THETA) =	.07513	.05230
ENERGY-DISSIPATION THICKNESS =	.05192	.09265
ENTHALPY THICKNESS =	.09231	.00216
SHAPE FACTOR 12 (DELSTAR/THETA) =	.00215	1.43501
SHAPE FACTOR 32 (ENERGY/THETA) =	1.44690	1.77136
MOMENTUM THICKNESS REYNOLDS NUMBER =	1.77762	2681.04
DISPLACEMENT THICKNESS REYNOLDS NUMBER =	2681.04	3879.19
SKIN FRICTION COEFFICIENT =	2700.64	3875.46
FRICTION VELOCITY =	.003344	
LAW OF THE WALL CONSTANT (K) =	.09944	
LAW OF THE WALL CONSTANT (C) =	.41000	
WAKE STRENGTH =	5.00000	.43118
CLAUSERS 'DELTA' INTEGRAL =	-1.57831	-1.74985
CLAUSERS 'G' INTEGRAL =	11.87387	11.59972
DISPLACEMENT THICKNESS - CONSTANT DENSITY =	.06938	.07291
MOMENTUM THICKNESS - CONSTANT DENSITY =	.05238	.05277
SHAPE FACTOR 12 - CONSTANT DENSITY =	1.32456	1.38162

LOCATION -X- 28.18001

Z = +6 INCHES

Table 36.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 9. GRID NO. 2

REDUCED PROFILE DATA

N	Y INCHES	Y/ DELTA	U FT/SEC	T DEG.F	U/UE	THETA	UTAU	U(+)	T(+)	Y(+)
1	.0072	.014	45.24	81.53	.460	.411	-12.964	11.035	7.851	14.551
2	.0065	.017	47.06	80.83	.478	.445	-12.520	11.479	8.503	17.167
3	.0093	.018	48.65	80.52	.494	.461	-12.133	11.867	8.798	18.777
4	.0107	.021	51.04	80.06	.519	.483	-11.548	12.452	9.228	21.594
5	.0114	.023	52.24	79.81	.531	.496	-11.256	12.744	9.459	23.003
6	.0130	.026	54.11	79.21	.550	.525	-10.800	13.200	10.020	26.223
7	.0144	.028	55.39	78.95	.563	.538	-10.487	13.512	10.360	29.041
8	.0152	.030	55.89	78.85	.568	.543	-10.366	13.633	10.360	30.651
9	.0176	.035	57.39	78.57	.583	.556	-10.001	13.998	10.619	35.481
10	.0198	.039	58.41	78.08	.594	.580	-9.751	14.248	11.081	39.908
11	.0215	.042	59.18	77.99	.602	.585	-9.564	14.436	11.169	43.330
12	.0231	.046	59.80	77.92	.608	.588	-9.413	14.586	11.231	46.550
13	.0244	.048	60.23	77.76	.612	.596	-9.307	14.693	11.378	49.166
14	.0267	.053	60.98	77.38	.620	.615	-9.125	14.875	11.740	53.795
15	.0282	.056	61.27	77.24	.623	.622	-9.053	14.947	11.866	56.814
16	.0306	.060	62.07	77.14	.631	.627	-8.858	15.142	11.962	61.644
17	.0320	.063	62.36	77.12	.634	.628	-8.787	15.213	11.986	64.461
18	.0344	.076	63.94	76.74	.650	.646	-8.401	15.598	12.339	77.341
19	.0456	.090	65.52	76.36	.666	.665	-8.017	15.982	12.698	91.831
20	.0524	.103	66.73	76.20	.678	.673	-7.721	16.279	12.841	105.517
21	.0566	.116	67.82	75.81	.689	.692	-7.457	16.543	13.207	117.994
22	.0652	.124	69.01	75.65	.701	.700	-7.166	16.833	13.361	131.277
23	.C723	.143	70.23	75.27	.714	.719	-6.867	17.132	13.720	145.566
24	.0786	.155	71.06	75.15	.722	.724	-6.662	17.356	13.829	158.245
25	.0856	.169	72.11	74.94	.733	.735	-6.408	17.591	14.022	172.332
26	.0922	.182	73.53	74.74	.742	.744	-6.184	17.815	14.210	185.615
27	.0962	.194	73.67	74.60	.749	.751	-6.030	17.970	14.344	197.690
28	.1052	.208	74.71	74.32	.759	.765	-5.774	18.225	14.605	211.778
29	.1124	.222	75.36	74.34	.766	.764	-5.617	18.383	14.590	226.268
30	.1184	.234	76.13	74.08	.774	.777	-5.429	18.570	14.831	238.343
31	.1256	.248	76.99	73.97	.783	.782	-5.218	18.781	14.932	252.833
32	.1324	.261	77.49	73.87	.788	.787	-5.096	18.903	15.027	266.519
33	.1494	.295	79.32	73.49	.806	.806	-4.651	19.349	15.387	300.732
34	.1670	.330	81.20	73.11	.825	.824	-4.192	19.808	15.738	336.152
35	.1846	.364	82.80	72.89	.842	.836	-3.801	20.199	15.950	371.572
36	.2024	.399	84.49	72.60	.859	.850	-3.388	20.611	16.219	407.395
37	.2194	.433	85.82	72.32	.872	.863	-3.066	20.934	16.484	441.608
38	.2376	.469	87.11	72.02	.885	.878	-2.755	21.249	16.763	478.236
39	.2542	.502	88.27	71.83	.897	.888	-2.467	21.533	16.947	511.644
40	.2726	.538	89.54	71.61	.910	.898	-2.156	21.843	17.150	548.675
41	.2893	.571	90.68	71.36	.922	.911	-1.879	22.121	17.384	562.284
42	.3074	.607	91.77	71.22	.933	.918	-1.614	22.385	17.516	618.710
43	.3370	.665	93.37	70.82	.949	.937	-1.224	22.775	17.894	678.281
44	.3674	.725	94.44	70.56	.960	.950	-0.963	23.036	18.135	739.462
45	.3973	.784	95.74	70.24	.973	.966	-0.646	23.354	18.434	799.636
46	.4274	.843	96.53	70.09	.981	.973	-0.451	23.548	18.574	860.213
47	.4573	.902	97.12	69.97	.987	.979	-0.208	23.691	18.690	920.388
48	.4876	.962	97.54	69.80	.991	.987	-0.206	23.794	18.843	981.367
49	.5176	1.021	97.85	69.77	.995	.989	-0.130	23.870	18.875	1041.743
50	.5472	1.080	98.12	69.69	.997	.992	-0.065	23.935	18.945	1101.314
51	.5773	1.139	98.20	69.63	.998	.996	-0.046	23.954	19.007	1161.891
52	.6074	1.199	98.27	69.60	.999	.997	-0.027	23.973	19.029	1222.468
53	.8075	1.593	98.48	69.55	1.001	1.000	-0.023	24.023	19.083	1625.174
54	1.0076	1.988	98.38	69.55	1.000	1.000	-0.021	23.999	19.082	2027.880
55	1.2074	2.383	98.29	69.55	.999	.999	-0.022	23.977	19.078	2429.982
56	1.4074	2.777	98.25	69.52	.999	1.001	-0.032	23.967	19.109	2832.487
57	1.6076	3.172	98.27	69.51	.999	1.002	-0.029	23.971	19.119	3235.395
58	1.8074	3.567	98.22	69.52	.998	1.001	-0.040	23.959	19.109	3637.497
59	2.0075	3.961	98.26	69.49	.999	1.002	-0.030	23.969	19.135	4040.203
60	2.2076	4.356	98.19	69.49	.998	1.003	-0.047	23.952	19.139	4442.909
61	2.4073	4.750	98.22	69.51	.998	1.001	-0.041	23.959	19.113	4844.810
62	2.6074	5.145	98.14	69.50	.997	1.002	-0.061	23.939	19.125	5247.517

Table 36.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 1D. GRID NO. 2

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	SUBLAYER FUNCTION FROM WALL TO $Y+ = 35$	STANDARD
FREE STREAM VELOCITY	= 98.438		98.438
FREE STREAM TEMPERATURE	= 69.598		
WALL TEMPERATURE	= 90.390		
WALL HEAT FLUX	= .07823		
FREE STREAM DENSITY	= .07693		
FREE STREAM KINEMATIC VISCOSITY	= .0001568		
DENSITY OF FLUID AT WALL	= .07403		
KINEMATIC VISCOSITY OF FLUID AT WALL	= .0001700		
WALL/FREE STREAM DENSITY RATIO	= .96220		
LOCATION REYNOLDS NUMBER (REX)	= 1455592.22		
INPUT VALUE OF VELOCITY DELTA	= .70000		
INPUT VALUE OF TEMPERATURE DELTA	= .90000		
CALCULATED DELTA	=		.49373
DELTA 99.5% INPUT	= .00000		
DISPLACEMENT THICKNESS (DELSTAR)	= .07254		.07237
MOMENTUM THICKNESS ($\theta(TA)$)	= .04995		.05039
ENERGY-DISSIPATION THICKNESS	= .08890		.08932
ENTHALPY THICKNESS	= .00214		.00215
SHAPE FACTOR 12 (DELSTAR/ $\theta(TA)$)	= 1.45213		1.43613
SHAPE FACTOR 32 (ENERGY/ $\theta(TA)$)	= 1.77960		1.77253
MOMENTUM THICKNESS REYNOLDS NUMBER	= 2580.33		2602.88
DISPLACEMENT THICKNESS REYNOLDS NUMBER	= 3746.97		3738.08
SKIN FRICTION COEFFICIENT	= .003391		
FRICTION VELOCITY	= 4.13188		
LAW OF THE WALL CONSTANT (K)	= .41000		
LAW OF THE WALL CONSTANT (C)	= 5.00000		
WAKE STRENGTH	=		.40508
CLAUSERS 'DELTA' INTEGRAL	= -1.49559		-1.67295
CLAUSERS 'G' INTEGRAL	= 11.34975		10.98743
DISPLACEMENT THICKNESS - CONSTANT DENSITY	= .06659		.07022
MOMENTUM THICKNESS - CONSTANT DENSITY	= .05041		.05086
SHAPE FACTOR 12 - CONSTANT DENSITY	= 1.32100		1.38060

LOCATION -X- 28.18001

Z = -6 INCHES

Table 37.

JOB KLD72 TAPE 3166R- FILES 93-316, RUNS 7.01-7.24 04/03/79
 RUN NO. 7. POINT 10. GRID NO. 2

REDUCED PROFILE DATA

N	Y INCHES	Y'	U	T	U/UE	THETA	UTAU	U(+)	T(+)	Y(+)
1	.0076	.015	45.46	81.85	.462	.411	-12.821	11.003	8.017	15.453
2	.0087	.018	48.11	81.23	.489	.440	-12.181	11.643	8.594	17.681
3	.0102	.021	51.16	80.67	.520	.468	-11.442	12.382	9.124	20.718
4	.0111	.023	52.41	80.38	.532	.481	-11.139	12.685	9.394	22.541
5	.0118	.024	53.41	80.12	.543	.494	-10.897	12.367	9.634	23.959
6	.0135	.027	55.23	79.56	.561	.521	-10.458	13.366	10.162	27.402
7	.0149	.030	56.04	79.27	.569	.535	-10.262	13.562	10.437	30.237
8	.0152	.032	56.85	79.17	.578	.540	-10.064	13.760	10.526	32.060
9	.0177	.036	57.64	78.78	.586	.558	-9.873	13.951	10.892	35.908
10	.0196	.040	58.63	78.47	.598	.573	-9.587	14.237	11.183	39.756
11	.0219	.044	59.64	78.31	.606	.581	-9.390	14.434	11.332	44.414
12	.0234	.047	60.14	78.09	.611	.591	-9.269	14.555	11.537	47.452
13	.0249	.050	60.73	77.96	.617	.598	-9.127	14.697	11.667	50.490
14	.0271	.055	61.26	77.70	.623	.610	-8.992	14.832	11.905	54.945
15	.0269	.059	61.80	77.51	.628	.619	-8.868	14.956	12.085	58.591
16	.0309	.063	62.53	77.35	.635	.627	-8.691	15.133	12.234	62.641
17	.0325	.066	62.98	77.25	.640	.632	-8.582	15.242	12.326	65.882
18	.0387	.078	64.45	76.80	.655	.654	-8.226	15.598	12.750	78.438
19	.0459	.093	66.17	76.57	.672	.665	-7.810	16.014	12.973	93.020
20	.0528	.107	67.41	76.25	.685	.680	-7.509	16.315	13.270	106.995
21	.0589	.119	68.36	76.04	.695	.690	-7.273	16.551	13.467	119.349
22	.0659	.134	69.64	75.73	.707	.705	-6.971	16.853	13.754	133.525
23	.0727	.147	70.90	75.49	.720	.717	-6.664	17.160	13.986	147.297
24	.0769	.160	71.81	75.37	.730	.722	-6.444	17.380	14.080	159.854
25	.0857	.174	72.79	75.14	.739	.733	-6.206	17.618	14.308	173.626
26	.0929	.188	73.79	74.94	.750	.743	-5.965	17.859	14.499	188.208
27	.0991	.201	74.49	74.77	.757	.751	-5.795	18.029	14.655	200.764
28	.1057	.214	75.36	74.68	.766	.755	-5.586	18.238	14.739	214.131
29	.1127	.228	76.04	74.50	.772	.764	-5.421	18.403	14.912	228.308
30	.1187	.240	76.80	74.33	.780	.772	-5.237	18.587	15.068	240.446
31	.1261	.255	77.63	74.16	.789	.781	-5.036	18.788	15.233	255.446
32	.1327	.269	78.35	73.97	.796	.790	-4.862	18.962	15.406	268.813
33	.1497	.303	80.20	73.51	.815	.812	-4.413	19.411	15.839	303.242
34	.1675	.339	82.06	73.27	.834	.824	-3.963	19.861	16.067	339.292
35	.1849	.375	83.62	73.02	.849	.835	-3.567	20.237	16.297	374.532
36	.2029	.411	85.10	72.67	.864	.852	-3.229	20.595	16.630	410.986
37	.2199	.445	86.45	72.41	.878	.865	-2.962	20.922	16.869	445.416
38	.2383	.483	87.78	72.16	.892	.877	-2.680	21.244	17.105	482.681
39	.2547	.516	89.08	71.86	.905	.891	-2.465	21.559	17.388	515.895
40	.2727	.552	90.22	71.63	.917	.902	-1.988	21.836	17.606	552.350
41	.2900	.587	91.33	71.43	.928	.912	-1.719	22.105	17.791	587.387
42	.3078	.623	92.31	71.09	.938	.928	-1.483	22.341	18.109	623.436
43	.3375	.684	93.93	70.75	.954	.944	-1.091	22.733	18.426	683.586
44	.3679	.745	95.22	70.45	.967	.959	-0.779	23.045	18.707	745.154
45	.3978	.806	96.15	70.32	.977	.965	-0.554	23.270	18.833	805.710
46	.4279	.867	96.87	70.01	.984	.980	-0.380	23.444	19.124	866.670
47	.4561	.926	97.46	69.92	.990	.984	-0.236	23.588	19.206	927.833
48	.4860	.986	97.78	69.79	.993	.991	-0.159	23.665	19.328	988.388
49	.5177	1.049	98.08	69.78	.996	.991	-0.087	23.737	19.339	1048.539
50	.5477	1.109	98.21	69.71	.998	.995	-0.056	23.768	19.406	1109.296
51	.5780	1.171	98.30	69.63	.999	.999	-0.034	23.790	19.483	1170.662
52	.6079	1.231	98.37	69.64	.999	.998	-0.016	23.808	19.467	1231.217
53	.6877	1.636	98.50	69.59	1.001	1.001	-0.015	23.839	19.522	1635.864
54	.8077	2.041	98.41	69.60	1.000	1.000	-0.008	23.816	19.506	2040.917
55	1.0077	2.446	98.41	69.59	1.000	1.001	-0.007	23.817	19.521	2445.969
56	1.4077	2.851	98.40	69.60	1.000	1.000	-0.010	23.814	19.501	2851.021
57	1.6076	3.257	98.39	69.64	1.000	1.000	-0.012	23.812	19.466	3256.276
58	1.8077	3.661	98.41	69.61	1.000	1.000	-0.006	23.818	19.500	3661.126
59	2.0079	4.067	98.40	69.64	1.000	1.000	-0.008	23.816	19.473	4066.583
60	2.2077	4.472	98.29	69.64	1.000	1.000	-0.036	23.788	19.469	4471.230
61	2.4080	4.877	98.29	69.63	1.000	1.000	-0.035	23.789	19.479	4876.890
62	2.6079	5.282	98.22	69.67	1.000	1.000	-0.053	23.771	19.447	5281.740

Table 37.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 11. GRID NO. 2

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO Y+ = 35
FREE STREAM VELOCITY	= 98.483	98.483
FREE STREAM TEMPERATURE	= 70.230	
WALL TEMPERATURE	= 91.450	
WALL HEAT FLUX	= .07769	
FREE STREAM DENSITY	= .07684	
FREE STREAM KINEMATIC VISCOSITY	= .0001591	
DENSITY OF FLUID AT WALL	= .07388	
KINEMATIC VISCOSITY OF FLUID AT WALL	= .0001706	
WALL/FREE STREAM DENSITY RATIO	= .96150	
LOCATION REYNOLDS NUMBER (REX)	= 1862625.37	
INPUT VALUE OF VELOCITY DELTA	= .73000	
INPUT VALUE OF TEMPERATURE DELTA	= .83000	
CALCULATED DELTA		.62409
DISPLACEMENT THICKNESS (DELSTAR)	= .09265	.09248
MOMENTUM THICKNESS (THETA)	= .66426	.66469
ENERGY-DISSIPATION THICKNESS	= .11425	.11466
ENTHALPY THICKNESS	= .00279	.00280
SHAPE FACTOR 12 (DELSTAR/THETA)	= 1.44172	1.42950
SHAPE FACTOR 32 (ENERGY/THETA)	= 1.77790	1.77236
MOMENTUM THICKNESS REYNOLDS NUMBER	= 3313.84	3336.01
DISPLACEMENT THICKNESS REYNOLDS NUMBER	= 4777.64	4768.82
SKIN FRICTION COEFFICIENT	= .003165	
FRICTION VELOCITY	= 3.99532	
LAW OF THE WALL CONSTANT (K)	= .41000	
LAW OF THE WALL CONSTANT (C)	= 5.00000	
WAKE STRENGTH		.47565
CLAUSERS 'DELTA' INTEGRAL	= -2.01982	-2.21076
DISPLACEMENT THICKNESS - CONSTANT DENSITY	= 15.20041	14.81751
MOMENTUM THICKNESS - CONSTANT DENSITY	= .08591	.08969
SHAPE FACTOR 12 - CONSTANT DENSITY	= .06485	.06530
	= 1.32461	1.37346

LOCATION -X- 36.12000

Z = CENTERLINE

Table 38.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 11. GRID NO. 2

REDUCED PROFILE DATA

N	Y INCHES	Y/ DELT A	U FT/SEC	T DEG.F	U/UE	THETA	UTAU	U(+)	T(+)	Y(+)
1	.0079	.013	44.06	82.68	.447	.413	-13.620	11.029	7.995	15.477
2	.0095	.015	47.50	81.92	.482	.449	-12.760	11.890	8.692	18.600
3	.0103	.017	49.22	81.81	.500	.454	-12.331	12.316	8.791	20.161
4	.0114	.018	50.46	81.58	.512	.465	-12.019	12.630	9.002	22.308
5	.0123	.020	51.72	81.23	.525	.482	-11.705	12.945	9.319	24.064
6	.0138	.022	53.10	80.86	.539	.499	-11.360	13.289	9.653	26.992
7	.0149	.024	53.72	80.68	.545	.508	-11.205	13.445	9.821	29.139
8	.0163	.026	54.91	80.40	.558	.521	-10.907	13.743	10.080	31.871
9	.0184	.028	55.92	79.97	.568	.541	-10.635	13.997	10.464	35.970
10	.0203	.033	56.86	79.87	.577	.546	-10.417	14.232	10.562	39.678
11	.0221	.035	57.47	79.63	.584	.557	-10.264	14.385	10.775	43.191
12	.0237	.038	58.13	79.46	.590	.565	-10.100	14.550	10.929	46.313
13	.0251	.040	58.49	79.30	.594	.573	-10.011	14.638	11.082	49.046
14	.0275	.044	59.37	78.97	.603	.588	-9.789	14.661	11.377	53.730
15	.0289	.046	59.67	78.83	.606	.594	-9.714	14.935	11.504	56.462
16	.0309	.050	60.26	78.69	.612	.601	-9.567	15.082	11.632	60.366
17	.0327	.052	60.74	78.61	.617	.605	-9.446	15.203	11.712	63.879
18	.0369	.062	62.27	78.28	.632	.621	-9.063	15.587	12.012	75.979
19	.0464	.074	63.86	77.81	.648	.643	-8.666	15.983	12.440	90.617
20	.0529	.085	65.05	77.58	.661	.654	-8.368	16.282	12.650	103.303
21	.0593	.095	66.08	77.32	.671	.666	-8.110	16.539	12.882	115.793
22	.0660	.106	67.13	77.10	.682	.676	-7.847	16.802	13.089	128.870
23	.0729	.117	68.19	76.74	.692	.693	-7.561	17.069	13.415	142.336
24	.C789	.126	69.07	76.64	.701	.698	-7.362	17.288	13.504	154.046
25	.0863	.138	69.91	76.43	.710	.708	-7.151	17.499	13.700	168.489
26	.0933	.150	70.83	76.25	.719	.716	-6.921	17.728	13.865	182.151
27	.0994	.159	71.47	76.08	.726	.724	-6.761	17.888	14.016	194.056
28	.1059	.170	72.39	75.94	.735	.731	-6.531	18.118	14.143	206.742
29	.1130	.181	73.13	75.69	.743	.742	-6.345	18.304	14.367	2220.599
30	.1190	.191	73.82	75.54	.750	.750	-6.173	18.476	14.511	232.309
31	.1263	.202	74.40	75.1	.755	.756	-6.027	18.622	14.623	246.556
32	.1333	.214	75.21	75.5	.764	.764	-5.824	18.826	14.776	260.218
33	.1499	.240	76.58	74.86	.778	.782	-5.463	19.167	15.132	292.616
34	.1678	.269	78.28	74.66	.795	.791	-5.056	19.593	15.314	327.551
35	.1849	.296	79.39	74.39	.806	.804	-4.779	19.871	15.560	360.925
36	.2035	.326	81.C2	74.19	.823	.814	-4.370	20.280	15.743	397.226
37	.22C5	.353	82.35	73.86	.836	.829	-4.038	20.612	16.039	430.405
38	.2383	.382	83.45	73.53	.847	.844	-3.764	20.886	16.341	465.184
39	.2553	.409	84.74	73.32	.860	.854	-3.439	21.200	16.529	498.323
40	.2732	.438	85.92	73.15	.872	.863	-3.140	21.505	16.691	533.258
41	.2901	.465	87.06	72.91	.884	.874	-2.859	21.791	16.907	566.242
42	.3079	.493	88.01	72.65	.894	.886	-2.621	22.029	17.145	600.982
43	.3429	.549	90.00	72.27	.914	.904	-2.122	22.228	17.486	669.290
44	.3781	.606	91.71	72.04	.931	.915	-1.696	22.954	17.704	737.990
45	.4134	.662	93.C6	71.58	.945	.936	-1.358	23.292	18.121	806.884
46	.4483	.718	94.61	71.37	.961	.946	-0.969	23.680	18.312	874.998
47	.4829	.774	95.33	71.09	.968	.959	-0.789	23.860	18.562	942.526
48	.5179	.830	96.33	70.95	.978	.966	-0.538	24.112	18.698	1010.835
49	.5531	.886	97.00	70.76	.985	.975	-0.372	24.278	18.867	1079.534
50	.5879	.942	97.53	70.58	.990	.983	-0.237	24.412	19.030	1147.453
51	.6231	.998	97.83	70.50	.993	.987	-0.163	24.487	19.104	1216.152
52	.6583	1.055	98.14	70.40	.997	.992	-0.085	24.565	19.193	1284.851
53	.6931	1.111	98.35	70.34	.999	.995	-0.034	24.615	19.253	1352.770
54	.7279	1.166	98.43	70.36	1.000	.994	-0.012	24.637	19.234	1420.688
55	.7629	1.222	98.42	70.33	1.000	.995	-0.015	24.635	19.261	1488.997
56	.7981	1.279	98.51	70.28	1.000	.998	-0.008	24.658	19.309	1557.696
57	.8333	1.335	98.51	70.24	1.000	.999	-0.007	24.656	19.339	1626.396
58	.8661	1.391	98.63	70.21	1.002	1.001	-0.037	24.667	19.372	1694.314
59	.9035	1.448	98.61	70.24	1.001	1.000	-0.031	24.680	19.343	1763.404
60	.9384	1.504	98.59	70.20	1.001	1.001	-0.028	24.677	19.377	1831.517
61	.9733	1.560	98.63	70.17	1.002	1.003	-0.038	24.687	19.403	1899.631
62	.0085	1.616	98.58	70.18	1.000	1.002	-0.025	24.675	19.396	1968.330
63	.1.2931	2.0572	98.46	70.17	1.000	1.003	-0.005	24.645	19.401	2523.779
64	.1.5794	2.531	98.50	70.20	1.000	1.001	-0.005	24.654	19.376	3082.546
65	.1.8655	2.989	98.36	70.19	0.999	1.002	-0.032	24.618	19.386	3640.922
66	.2.1507	3.446	98.36	70.19	0.999	1.002	-0.030	24.619	19.386	4197.542
67	.2.4365	3.904	98.31	70.21	0.998	1.001	-0.043	24.606	19.371	4755.333
68	.2.7220	4.362	98.36	70.21	0.999	1.001	-0.030	24.619	19.371	5312.538
69	3.0080	4.820	98.38	70.22	0.999	1.000	-0.025	24.624	19.360	5870.719

Table 38.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 12. GRID NO. 2

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO $Y+ = 35$
FREE STREAM VELOCITY =	98.743	98.743
FREE STREAM TEMPERATURE =	68.365	
WALL TEMPERATURE =	90.950	
WALL HEAT FLUX =	.07688	
FREE STREAM DENSITY =	.07669	
FREE STREAM KINEMATIC VISCOSITY =	.0001590	
DENSITY OF FLUID AT WALL =	.07354	
KINEMATIC VISCOSITY OF FLUID AT WALL =	.0001713	
WALL/FREE STREAM DENSITY RATIO =	.95898	
LOCATION REYNOLDS NUMBER (REX) =	2289495.50	
INPUT VALUE OF VELOCITY DELTA =	.88000	
INPUT VALUE OF TEMPERATURE DELTA =	.98000	
CALCULATED DELTA =		.75613
DISPLACEMENT THICKNESS (DELSTAR) =	.00000	
MOMENTUM THICKNESS (THETA) =	.10810	.10819
ENERGY-DISSIPATION THICKNESS =	.07614	.07633
ENTHALPY THICKNESS =	.13557	.13569
SHAPE FACTOR 12 (DELSTAR/THETA) =	.00352	.00352
SHAPE FACTOR 32 (ENERGY/THETA) =	1.41970	1.41733
MOMENTUM THICKNESS REYNOLDS NUMBER =	1.78051	1.77755
DISPLACEMENT THICKNESS REYNOLDS NUMBER =	3939.50	3949.52
Skin Friction Coefficient =	5592.92	5597.76
Friction Velocity =	.003085	
LAW OF THE WALL CONSTANT (K) =	3.96012	
LAW OF THE WALL CONSTANT (C) =	.41000	
WAKE STRENGTH =	5.00000	.44447
CLAUSERS 'DELTA' INTEGRAL =	-2.46493	-2.61005
CLAUSERS 'G' INTEGRAL =	17.22683	17.15648
DISPLACEMENT THICKNESS - CONSTANT DENSITY =	.10172	.10468
MOMENTUM THICKNESS - CONSTANT DENSITY =	.07688	.07708
SHAPE FACTOR 12 - CONSTANT DENSITY =	1.32315	1.35800
LOCATION -X- =	44.25000	
Z = CENTERLINE		

Table 39.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 12. GRID NO. 2

REDUCED PROFILE DATA

N	INCHES	Y	Y/	U	T	U/UE	THETA	UTAU	U(+)	T(+)	Y(+)
1	.0057	.008	37.55	83.72	.380	.320	-15.452	9.452	6.570	11.041	
2	.0070	.009	40.94	82.73	.415	.364	-14.596	10.336	7.474	13.546	
3	.0082	.011	44.30	81.97	.449	.398	-13.747	11.288	8.163	15.858	
4	.0086	.012	45.61	81.64	.462	.412	-13.416	11.518	8.463	17.014	
5	.0100	.013	48.23	81.09	.488	.436	-12.756	12.178	8.961	19.326	
6	.0116	.015	50.45	80.50	.511	.463	-12.196	12.739	9.498	22.409	
7	.0130	.017	51.87	80.05	.525	.483	-11.835	13.099	9.911	25.107	
8	.0138	.018	52.56	79.82	.532	.493	-11.663	13.271	10.121	26.649	
9	.0160	.021	54.18	79.32	.549	.515	-11.253	13.682	10.576	30.888	
10	.0181	.024	55.45	78.88	.562	.534	-10.932	14.003	10.971	34.934	
11	.0212	.026	56.12	78.70	.566	.542	-10.762	14.172	11.136	38.210	
12	.0215	.028	56.82	78.54	.575	.549	-10.587	14.347	11.279	41.485	
13	.0230	.030	57.39	78.25	.581	.562	-10.442	14.492	11.548	44.376	
14	.0250	.033	57.96	78.05	.587	.571	-10.298	14.636	11.731	48.229	
15	.0270	.036	58.66	78.08	.594	.570	-10.121	14.813	11.703	52.083	
16	.0290	.038	59.29	77.97	.600	.575	-9.962	14.973	11.805	55.937	
17	.0306	.041	59.80	77.81	.606	.582	-9.835	15.100	11.949	59.020	
18	.0369	.049	61.33	77.18	.621	.610	-9.447	15.487	12.521	71.159	
19	.0440	.058	62.75	76.75	.636	.629	-9.088	15.847	12.906	84.840	
20	.0510	.067	64.09	76.30	.649	.649	-8.751	16.183	13.318	98.328	
21	.0569	.075	65.06	76.02	.659	.661	-8.499	16.435	13.570	109.696	
22	.0638	.084	66.38	75.76	.672	.672	-8.173	16.762	13.808	122.992	
23	.0709	.094	67.34	75.65	.682	.677	-7.929	17.005	13.911	136.673	
24	.0772	.102	68.10	75.45	.690	.686	-7.738	17.197	14.095	148.812	
25	.0838	.111	68.93	75.22	.698	.696	-7.528	17.406	14.299	161.529	
26	.0912	.121	69.66	74.92	.705	.710	-7.344	17.590	14.572	175.788	
27	.0970	.128	70.39	74.88	.713	.711	-7.158	17.776	14.809	186.964	
28	.1040	.138	70.95	74.66	.719	.721	-7.017	17.917	14.813	200.452	
29	.1112	.147	71.77	74.59	.727	.724	-6.811	18.123	14.873	214.325	
30	.1172	.155	72.52	74.52	.734	.728	-6.621	18.313	14.938	225.886	
31	.1242	.164	72.86	74.25	.738	.740	-6.535	18.399	15.165	239.374	
32	.1314	.174	73.68	74.04	.746	.745	-6.329	18.605	15.376	253.248	
33	.1479	.196	74.94	73.85	.759	.756	-6.011	18.924	15.548	285.041	
34	.1656	.219	76.64	73.46	.776	.776	-5.582	19.352	15.699	319.147	
35	.1829	.242	77.54	73.24	.785	.785	-5.354	19.580	16.102	352.481	
36	.2012	.266	78.66	72.98	.799	.799	-5.017	19.917	16.333	387.743	
37	.2178	.268	80.04	72.67	.811	.809	-4.723	20.211	16.616	419.729	
38	.2358	.312	81.22	72.38	.823	.822	-4.424	20.511	16.887	454.413	
39	.2531	.335	82.33	72.19	.834	.831	-4.148	20.790	17.057	487.747	
40	.2708	.358	83.23	72.07	.843	.836	-3.918	21.016	17.168	521.853	
41	.2880	.381	84.15	71.71	.852	.852	-3.685	21.250	17.488	554.995	
42	.3062	.405	85.34	71.55	.864	.859	-3.364	21.550	17.634	569.064	
43	.341C	.451	87.04	71.21	.881	.874	-2.956	21.978	17.944	657.119	
44	.3761	.497	88.69	70.82	.898	.891	-2.540	22.395	18.304	724.752	
45	.410E	.543	90.24	70.39	.914	.910	-2.148	22.787	18.692	791.614	
46	.4446	.590	91.68	70.23	.926	.917	-1.784	23.151	18.834	859.439	
47	.4811	.636	93.02	70.06	.942	.925	-1.445	23.490	18.988	927.072	
48	.5159	.682	94.10	69.66	.953	.943	-1.173	23.761	19.356	994.127	
49	.5510	.729	95.23	69.52	.964	.949	-8.87	24.047	19.482	1061.760	
50	.5862	.775	95.96	69.36	.972	.956	-6.997	24.238	19.626	1129.586	
51	.6208	.821	96.64	69.13	.979	.966	-5.324	24.402	20.023	1196.255	
52	.6557	.867	97.28	68.93	.985	.975	-3.629	24.566	1263.503		
53	.6907	.914	97.70	68.86	.989	.978	-2.626	24.672	1353U.943		
54	.7260	.960	98.09	68.70	.993	.985	-1.64	24.770	20.229	1398.962	
55	.7612	1.007	98.20	68.59	.994	.990	-1.38	24.796	20.333	1466.787	
56	.7962	1.053	98.40	68.54	.997	.992	-0.655	24.849	20.378	1534.227	
57	.8308	1.099	98.53	68.49	.998	.994	-0.053	24.882	20.416	1600.897	
58	.6660	1.145	98.66	68.49	.999	.994	-0.020	24.914	20.418	1666.723	
59	.9008	1.191	98.77	68.42	1.000	.997	-0.006	24.930	20.480	1735.778	
60	.9357	1.238	98.73	68.41	1.000	.998	-0.004	24.933	20.494	1803.025	
61	.9710	1.284	98.74	68.36	1.001	.999	-0.002	24.952	20.522	1871.043	
62	1.0058	1.330	98.81	68.38	1.001	.001	-0.017	24.952	20.564	1938.744	
63	1.3386	1.771	98.81	68.34	1.001	1.001	-0.017	24.952	20.564	2222.161	
64	1.6722	2.212	98.81	68.38	1.001	1.000	-0.018	24.952	20.564	3865.734	
65	2.0062	2.653	98.80	68.34	1.001	1.000	-0.014	24.952	20.544	5148.448	
66	2.3391	3.054	98.75	68.37	1.000	1.000	-0.007	24.941	20.545	5792.406	
67	2.6719	3.534	98.77	68.35	1.000	1.000	-0.009	24.926	20.545	6433.859	
68	3.0061	3.976	98.71	68.35	1.000	1.001	-0.014	24.920	20.569	7075.120	
69	3.3390	4.416	98.69	68.33	1.000	1.002	-0.014	24.920	20.569	7719.463	
70	3.6718	4.856	98.69	68.35	1.000	1.001	-0.005	24.939	20.560		
71	4.0062	5.298	98.76	68.34	1.000	1.001	-0.005	24.939	20.560		

Table 39.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 13. GRID NO. 2

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	SUBLAYER FUNCTION FROM WALL TO Y+=35	STANDARD
FREE STREAM VELOCITY =	98.605	98.605	
FREE STREAM TEMPERATURE =	68.719		
WALL TEMPERATURE =	91.260		
WALL HEAT FLUX =	.07820		
FREE STREAM DENSITY =	.07664		
FREE STREAM KINEMATIC VISCOSITY =	.0001592		
DENSITY OF FLUID AT WALL =	.07350		
KINEMATIC VISCOSITY OF FLUID AT WALL =	.0001714		
WALL/FREE STREAM DENSITY RATIO =	.95909		
LOCATION REYNOLDS NUMBER (REX) =	2283583.87		
INPUT VALUE OF VELOCITY DELTA =	.92000		
INPUT VALUE OF TEMPERATURE DELTA =	.97000		
CALCULATED DELTA =			.76072
DELTA 99.5% INPUT =	.00000		
DISPLACEMENT THICKNESS (DELSTAR) =	.11020		.11044
MOMENTUM THICKNESS (THETAA) =	.07783		.07793
ENERGY-DISSIPATION THICKNESS =	.13844		.13844
ENTHALPY THICKNESS =	.00342		.00342
SHAPE FACTOR 12 (DELSTAR/THETAA) =	1.41595		1.41707
SHAPE FACTOR 32 (ENERGY/THETAA) =	1.77879		1.77643
MOMENTUM THICKNESS REYNOLDS NUMBER =	4016.53		4021.85
DISPLACEMENT THICKNESS REYNOLDS NUMBER =	5687.19		5699.24
SKIN FRICTION COEFFICIENT =	.003051		
FRICTION VELOCITY =	3.93252		
LAW OF THE WALL CONSTANT (K) =	.41000		
LAW OF THE WALL CONSTANT (C) =	5.00000		
WAKE STRENGTH =			.47413
CLAUSERS 'DELTA' INTEGRAL =	-2.55659		-2.68361
CLAUSERS 'G' INTEGPAL =	17.74484		17.82472
DISPLACEMENT THICKNESS - CONSTANT DENSITY =	.10438		.10703
MOMENTUM THICKNESS - CONSTANT DENSITY =	.07857		.07868
SHAPE FACTOR 12 - CONSTANT DENSITY =	1.32850		1.36035
LOCATION -X- =	44.25000		
Z = +6 INCHES			

Table 40.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 D4/03/79
 RUN NO. 7. POINT 13. GRID NO. 2

REDUCED PROFILE DATA

N	Y INCHES	Y/	U	T	U/UE	THETA	UTAU	U(+)	T(+)	Y(+)
1	.0048	.006	34.99	84.60	.355	.296	-16.176	8.898	5.912	9.233
2	.0063	.008	38.56	83.33	.391	.352	-15.268	9.806	7.031	12.100
3	.0072	.010	41.36	82.69	.419	.380	-14.557	10.517	7.606	13.820
4	.0080	.011	44.08	82.31	.447	.397	-13.666	11.209	7.940	15.350
5	.0092	.012	46.43	81.59	.471	.426	-13.266	11.806	8.577	17.643
6	.0107	.014	49.19	80.84	.499	.462	-12.565	12.509	9.248	20.511
7	.0121	.016	50.72	80.56	.514	.474	-12.175	12.899	9.472	23.167
8	.0130	.017	51.59	80.29	.523	.487	-11.957	13.118	9.735	24.907
9	.0139	.020	53.30	79.58	.541	.518	-11.521	13.563	10.363	29.304
10	.0147	.022	54.51	79.39	.553	.527	-11.030	13.862	10.529	32.553
11	.0150	.025	55.23	79.02	.560	.543	-11.030	14.045	10.855	36.377
12	.0207	.027	56.27	78.82	.571	.552	-10.764	14.310	11.034	39.626
13	.0212	.029	56.89	78.66	.574	.559	-10.683	14.391	11.178	41.729
14	.0239	.031	57.26	78.35	.581	.573	-10.514	14.560	11.448	45.743
15	.0254	.034	57.88	78.16	.587	.581	-10.356	14.718	11.622	49.375
16	.0278	.037	58.49	77.98	.593	.589	-10.201	14.873	11.780	53.198
17	.0296	.039	59.06	77.81	.599	.597	-10.055	15.019	11.928	56.639
18	.0365	.046	60.78	77.40	.616	.615	-9.619	15.455	12.299	69.828
19	.0434	.057	62.17	77.13	.631	.627	-9.264	15.810	12.531	83.018
20	.0502	.066	63.50	76.80	.644	.642	-8.927	16.147	12.827	96.016
21	.0564	.074	64.56	76.44	.655	.657	-8.657	16.418	13.142	107.868
22	.0630	.083	65.43	76.09	.664	.673	-8.437	16.637	13.458	120.484
23	.0701	.092	66.55	75.95	.675	.679	-8.152	16.923	13.584	134.056
24	.0761	.100	67.29	75.79	.682	.686	-7.962	17.112	13.724	145.525
25	.0830	.109	68.22	75.48	.692	.700	-7.726	17.348	14.000	158.715
26	.0902	.119	69.03	75.24	.708	.711	-7.520	17.554	14.209	172.478
27	.0960	.126	69.82	75.17	.714	.714	-7.320	17.754	14.274	183.565
28	.1029	.135	70.53	74.97	.715	.723	-7.138	17.936	14.454	196.754
29	.1098	.144	71.04	74.73	.720	.734	-7.009	18.065	14.667	209.944
30	.1162	.153	71.74	74.62	.728	.738	-6.832	18.242	14.761	222.178
31	.1231	.162	72.40	74.53	.734	.742	-6.664	18.411	14.851	235.367
32	.1298	.171	72.97	74.51	.740	.743	-6.519	18.555	14.856	248.175
33	.1470	.193	74.66	74.09	.757	.762	-6.089	18.985	15.234	281.053
34	.1647	.217	75.84	73.82	.769	.774	-5.788	19.286	15.472	314.887
35	.1822	.240	77.01	73.45	.781	.790	-5.492	19.582	15.800	348.339
36	.2000	.263	78.33	73.13	.794	.804	-5.156	19.918	16.086	382.364
37	.2170	.285	79.63	72.92	.808	.814	-4.826	20.248	16.271	414.861
38	.2348	.309	80.56	72.78	.817	.820	-4.588	20.486	16.396	448.886
39	.2521	.331	81.62	72.61	.830	.827	-4.268	20.806	16.545	481.955
40	.2700	.355	82.78	72.26	.840	.843	-4.023	21.051	16.853	516.172
41	.2871	.377	83.64	72.06	.848	.852	-3.806	21.268	17.033	548.859
42	.3048	.401	84.75	72.02	.859	.854	-3.524	21.550	17.068	582.693
43	.3398	.447	86.65	71.47	.879	.878	-3.041	22.033	17.552	649.597
44	.3752	.493	88.23	71.12	.895	.893	-2.638	22.436	17.866	717.265
45	.4100	.539	90.01	70.78	.913	.909	-2.184	22.690	18.169	783.787
46	.4452	.585	91.44	70.53	.927	.920	-1.821	22.523	18.389	851.073
47	.4832	.631	92.46	70.19	.938	.935	-1.562	23.512	18.688	917.977
48	.5154	.678	93.70	70.13	.950	.938	-1.247	23.827	18.748	985.263
49	.5498	.723	94.83	69.79	.962	.953	-0.961	24.114	19.046	1051.020
50	.5850	.769	95.58	69.51	.969	.965	-0.769	24.305	19.294	1118.306
51	.6201	.815	96.26	69.35	.976	.972	-0.596	24.479	19.434	1185.401
52	.6549	.861	96.83	69.31	.982	.974	-0.452	24.622	19.474	1251.922
53	.6898	.907	97.28	69.12	.987	.982	-0.338	24.736	19.642	1318.635
54	.7250	.953	97.69	69.04	.991	.986	-0.233	24.841	19.709	1385.921
55	.7600	.999	98.03	68.96	.994	.989	-0.146	24.928	19.781	1452.824
56	.7952	1.045	98.20	68.86	.994	.994	-0.053	24.971	19.867	1520.110
57	.8298	1.091	98.37	68.80	.996	.996	-0.059	25.016	19.922	1586.250
58	.8648	1.137	98.49	68.83	.999	.995	-0.029	25.045	19.900	1653.153
59	.8999	1.183	98.53	68.79	.999	.997	-0.020	25.054	19.934	1720.248
60	.9350	1.229	98.55	68.78	.999	.997	-0.013	25.061	19.944	1787.343
61	.9698	1.275	98.61	68.76	1.000	.998	-0.002	25.076	19.964	1853.865
62	1.0050	1.321	98.65	68.74	1.000	.999	-0.011	25.085	19.973	1921.151
63	1.0380	1.375	98.61	68.71	1.000	1.001	-0.000	25.075	20.007	2557.692
64	1.06708	2.196	98.62	68.71	1.000	1.001	-0.004	25.078	20.007	3193.851
65	2.0048	2.635	98.57	68.72	1.000	1.000	-0.010	25.065	19.992	3832.304
66	2.3379	3.073	98.54	68.70	1.000	1.001	-0.016	25.058	20.017	4469.036
67	2.6714	3.512	98.52	68.72	1.000	1.000	-0.022	25.053	19.992	5106.533
68	3.0048	3.950	98.53	68.74	1.000	0.999	-0.020	25.054	19.981	5743.839
69	3.3379	4.388	98.60	68.83	1.000	0.995	-0.002	25.072	19.893	6380.572
70	3.6708	4.825	98.55	68.76	1.000	0.998	-0.015	25.059	19.963	7016.922
71	4.0050	5.265	98.59	68.75	1.000	0.999	-0.003	25.071	19.967	7655.757

Table 40.

JOB KLD72 TAPE 316ER- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 14. GRID NO. 2

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO $Y+ = 35$
FREE STREAM VELOCITY =	98.785	98.785
FREE STREAM TEMPERATURE =	68.964	
WALL TEMPERATURE =	91.310	
WALL HEAT FLUX =	.07699	
FREE STREAM DENSITY =	.07660	
DENSITY OF FLUID AT WALL =	.0001594	
KINEMATIC VISCOSITY OF FLUID AT WALL =	.07349	
WALL/FREE STREAM DENSITY RATIO =	.0001715	
LOCATION REYNOLDS NUMBER (REX) =	.95944	
INPUT VALUE OF VELOCITY DELTA =	2285884.03	
INPUT VALUE OF TEMPERATURE DELTA =	.95000	
CALCULATED DELTA =	1.10000	
DELTA 99.5% INPUT =	.00000	.75746
DISPLACEMENT THICKNESS (DELSTAR) =	.11130	.11131
MOMENTUM THICKNESS (THETA) =	.07812	.07837
ENERGY-DISSIPATION THICKNESS =	.13898	.13918
ENTHALPY THICKNESS =	.00351	.00352
SHAPE FACTOR 12 (DELSTAR/THETA) =	1.42476	1.42034
SHAPE FACTOR 32 (ENERGY/THETA) =	1.77908	1.77586
MOMENTUM THICKNESS REYNOLDS NUMBER =	4035.62	4048.52
DISPLACEMENT THICKNESS REYNOLDS NUMBER =	5749.79	5750.27
SKIN FRICTION COEFFICIENT =	.003027	
FRICTION VELOCITY =	3.92368	
LAW OF THE WALL CONSTANT (K) =	.41000	
LAW OF THE WALL CONSTANT (C) =	5.00000	
WAKE STRENGTH =		.49849
CLAUSERS 'DELTA' INTEGRAL =	-2.55457	-2.71401
CLAUSERS 'G' INTEGRAL =	18.33572	18.17202
DISPLACEMENT THICKNESS - CONSTANT DENSITY =	.10463	.10760
MOMENTUM THICKNESS - CONSTANT DENSITY =	.07887	.07913
SHAPE FACTOR 12 - CONSTANT DENSITY =	1.32664	1.36230

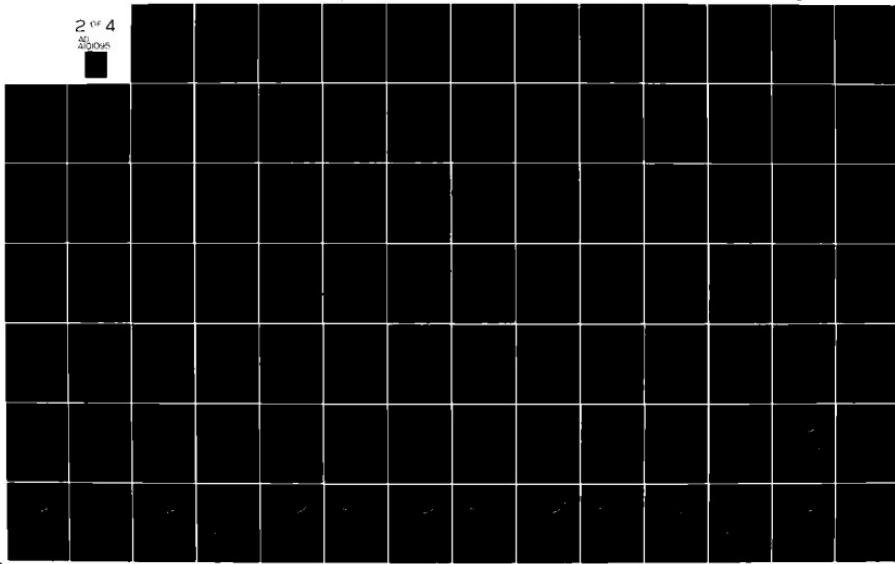
LOCATION -X- 44.25000

Z = -6 INCHES

Table 41.

AD-A101 095 UNITED TECHNOLOGIES RESEARCH CENTER EAST HARTFORD CONN F/G 20/4
DATA REPORT, VOLUME I, VELOCITY AND TEMPERATURE PROFILE DATA FO--ETC(1)
JAN 81 M F BLAIR F49620-78-C-0064
UNCLASSIFIED UTRC/R81-914388-15 AFOSR-TR-81-0516 NL

2 of 4
ALL
VERSIONS



JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO.

7.

POINT 14.

GRID NO. 2

REDUCED PROFILE DATA

N	Y INCHES	Y/ DELTA	U/ FT/SEC	T/ DEG.F	U/UE	THETA	U-UE	U(+)	T(+)	Y(+)
1	.0063	.008	37.89	83.60	.384	.345	-15.520	9.657	6.926	12.071
2	.0076	.010	41.69	82.65	.422	.388	-14.552	10.625	7.787	14.550
3	.0085	.011	44.48	82.16	.450	.410	-13.841	11.335	8.226	16.266
4	.0097	.013	46.97	81.60	.475	.434	-13.206	11.970	8.726	18.554
5	.0105	.014	48.37	81.33	.490	.447	-12.848	12.329	8.972	20.080
6	.0121	.016	50.12	80.45	.507	.486	-12.403	12.774	9.758	23.131
7	.0133	.018	51.74	80.27	.524	.494	-12.442	13.187	9.928	25.419
8	.0143	.019	52.59	80.22	.532	.496	-12.774	13.403	9.968	27.326
9	.0164	.022	53.74	79.89	.544	.511	-13.480	13.696	10.266	31.331
10	.0189	.025	54.97	79.29	.557	.538	-13.166	14.011	10.810	36.098
11	.0203	.027	55.55	79.10	.562	.546	-13.019	14.157	10.976	38.768
12	.0221	.029	56.51	78.83	.572	.558	-10.775	14.402	11.217	42.200
13	.0234	.032	57.05	78.59	.578	.569	-10.637	14.540	11.431	45.633
14	.0254	.034	57.38	78.43	.581	.576	-10.552	14.625	11.578	48.493
15	.0275	.036	58.02	78.30	.587	.582	-10.390	14.787	11.698	52.498
16	.0299	.040	58.81	78.30	.595	.586	-10.187	14.990	11.695	57.075
17	.0312	.041	59.31	78.22	.600	.613	-9.019	15.116	11.768	59.554
18	.0374	.049	60.60	77.66	.629	.628	-9.342	15.444	12.270	71.377
19	.0445	.059	62.13	77.28	.643	.641	-8.985	15.834	12.881	84.916
20	.0513	.068	63.53	76.98	.652	.653	-8.759	16.192	13.110	109.324
21	.0573	.076	64.42	76.73	.664	.667	-8.450	16.418	13.391	123.626
22	.0648	.086	65.63	76.41	.676	.674	-8.162	16.727	13.544	137.356
23	.0720	.095	66.76	76.24	.682	.683	-7.995	17.181	13.710	147.463
24	.0773	.102	67.41	76.06	.693	.697	-7.741	17.435	13.997	161.574
25	.0847	.112	68.41	75.74	.698	.700	-7.604	17.573	14.067	174.351
26	.0914	.121	68.95	75.66	.705	.703	-7.440	17.737	14.130	185.602
27	.0973	.128	69.59	75.59	.713	.713	-7.235	17.942	14.316	199.141
28	.1044	.138	70.40	75.38	.719	.725	-7.079	18.098	14.571	221.299
29	.1113	.147	71.01	75.10	.727	.733	-6.861	18.315	14.721	223.740
30	.1173	.155	71.86	74.93	.735	.735	-6.661	18.515	14.769	237.852
31	.1247	.165	72.65	74.88	.742	.741	-6.563	18.674	14.878	250.819
32	.1315	.174	73.27	74.76	.756	.755	-6.143	19.033	15.412	264.000
33	.1489	.197	74.68	74.43	.768	.767	-5.835	19.342	15.688	316.799
34	.1661	.219	75.89	74.17	.782	.781	-5.483	19.694	15.888	349.598
35	.1833	.242	77.27	73.86	.794	.793	-5.193	19.984	15.934	384.304
36	.2015	.266	78.41	73.58	.806	.805	-4.872	20.304	16.170	416.531
37	.2184	.288	79.67	73.32	.818	.815	-4.591	20.586	16.362	450.666
38	.2363	.312	80.77	73.11	.830	.818	-4.273	20.904	16.428	483.083
39	.2533	.334	82.02	73.03	.841	.837	-4.005	21.171	16.806	517.408
40	.2715	.358	83.07	72.61	.850	.844	-3.767	21.409	16.957	549.826
41	.2883	.381	84.00	72.45	.860	.852	-3.528	21.648	17.115	584.151
42	.3063	.404	84.94	72.27	.879	.875	-3.037	22.140	17.581	651.656
43	.3417	.451	86.87	71.75	.898	.887	-2.562	22.615	17.819	718.018
44	.3765	.497	88.73	71.49	.912	.903	-2.212	22.964	18.140	784.379
45	.4113	.543	90.10	71.13	.926	.914	-1.860	23.317	18.365	851.503
46	.4465	.590	91.49	70.88	.939	.928	-1.538	23.638	18.647	918.055
47	.4814	.636	92.75	70.57	.951	.947	-1.233	23.944	19.030	984.797
48	.5164	.682	93.95	70.14	.961	.947	-1.970	24.206	19.665	1051.731
49	.5515	.728	94.98	70.10	.969	.963	-1.785	24.392	19.342	1118.655
50	.5867	.775	95.71	69.79	.969	.963	-1.582	24.595	19.448	1185.407
51	.6216	.821	96.50	69.68	.977	.968	-1.426	24.751	19.508	1251.959
52	.6565	.867	97.11	69.61	.983	.971	-1.358	24.819	19.618	1319.083
53	.6917	.913	97.38	69.49	.986	.977	-1.253	24.924	19.790	1385.826
54	.7267	.959	97.79	69.29	.990	.985	-1.184	25.093	19.874	1451.805
55	.7613	1.005	98.06	69.20	.993	.989	-1.132	25.063	19.909	1518.929
56	.7965	1.052	98.34	69.16	.995	.991	-1.087	25.089	19.949	1586.053
57	.8317	1.098	98.44	69.12	.997	.993	-1.061	25.116	20.023	1652.033
58	.8663	1.144	98.55	69.08	.998	.995	-1.057	25.162	20.026	1718.716
59	.9013	1.190	98.56	69.04	.998	.997	-1.015	25.173	20.035	1852.452
60	.9365	1.236	98.73	69.03	.999	.998	-1.004	25.165	20.096	1919.957
61	.9714	1.282	98.77	69.02	1.000	.997	-1.012	25.192	20.102	2554.013
62	1.0068	1.329	98.74	68.95	1.001	1.001	-1.015	25.162	20.082	3189.212
63	1.3393	1.768	98.85	68.97	1.000	1.000	-1.007	25.184	20.077	3826.319
64	1.6724	2.206	98.73	68.97	1.000	1.000	-1.015	25.161	20.072	4461.327
65	2.0065	2.649	98.81	68.98	1.000	.999	-1.000	25.176	20.052	5096.717
66	2.3395	3.089	98.72	68.98	1.000	.998	-1.008	25.185	20.057	5733.633
67	2.6724	3.529	98.78	69.00	1.000	.998	-1.018	25.158	20.042	6367.879
68	3.0067	3.969	98.82	69.01	1.000	.998	-1.010	25.187	20.026	7003.651
69	3.3393	4.409	98.71	69.03	1.000	.997	-1.012	25.202	19.966	7640.185
70	3.6727	4.849	98.83	69.03	1.001	.994	-1.025	25.202	19.966	
71	4.0065	5.289	98.88	69.10	1.001					

Table 41.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 15. GRID NO. 2

BOUNDARY LAYER PROPERTIES

LINEAR INTERPOLATION	STANDARD SUBLAYER FUNCTION FROM TO WALL	WALL TO $Y+ = 35$
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FREE STREAM VELOCITY	=	98.898	98.898
FREE STREAM TEMPERATURE	=	68.802	
WALL TEMPERATURE	=	91.800	
WALL HEAT FLUX	=	.07737	
FREE STREAM DENSITY	=	.07662	
KINEMATIC VISCOSITY	=	.0001593	
DENSITY OF FLUID AT WALL	=	.07343	
KINEMATIC VISCOSITY OF FLUID AT WALL	=	.0001717	
WALL/FREE STREAM DENSITY RATIO	=	.95830	
LOCATION REYNOLDS NUMBER (REX)	=	2701638.62	
INPUT VALUE OF VELOCITY DELTA	=	1.08000	
INPUT VALUE OF TEMPERATURE DELTA	=	1.18000	
CALCULATED DELTA	=		.88723
DISPLACEMENT THICKNESS (DELSTAR)	=	.00000	
MOMENTUM THICKNESS (THETA)	=	.12680	.12699
ENERGY-DISSIPATION THICKNESS	=	.08985	.09000
ENTHALPY THICKNESS	=	.16008	.16012
SHAPE FACTOR 12 (DELSTAR/THETA)	=	.00416	.00416
SHAPE FACTOR 32 (ENERGY/THETA)	=	1.41118	1.41105
MOMENTUM THICKNESS REYNOLDS NUMBER	=	1.78152	1.77919
DISPLACEMENT THICKNESS REYNOLDS NUMBER	=	4649.58	4657.01
SKIN FRICTION COEFFICIENT	=	6561.37	6571.27
FRICTION VELOCITY	=	.002964	
LAW OF THE WALL CONSTANT (K)	=	3.88916	
LAW OF THE WALL CONSTANT (C)	=	.41000	
WAKE STRENGTH	=	5.00000	.47639
CLAUSERS 'DELTA' INTEGRAL	=	-2.98334	-3.12375
CLAUSERS 'G' INTEGRAL	=	20.63955	20.66568
DISPLACEMENT THICKNESS - CONSTANT DENSITY	=	.11998	.12284
MOMENTUM THICKNESS - CONSTANT DENSITY	=	.09073	.09088
SHAPE FACTOR 12 - CONSTANT DENSITY	=	1.32241	1.35164

LOCATION -X- 52.21001

Z = CENTERLINE

Table 42.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 15. GRID NO. 2

REDUCED PROFILE DATA

N	Y INCHES	Y/ DELTA	U FT/SEC	T DEG.F	U/UE	THETA	UTAU	U(+)	T(+)	Y(+)
1	.0053	.006	35.09	84.82	.355	.304	-16.408	0.022	6.184	10.059
2	.0066	.007	36.77	83.61	.392	.356	-15.460	9.969	7.252	12.512
3	.0078	.009	42.87	82.84	.434	.389	-14.405	11.024	7.933	14.777
4	.0086	.010	46.55	82.45	.450	.406	-13.974	11.455	8.278	16.286
5	.0095	.011	46.91	82.11	.474	.421	-13.368	12.061	8.585	17.985
6	.0111	.013	49.12	81.51	.497	.447	-12.800	12.630	9.112	21.004
7	.0125	.014	50.60	80.98	.512	.470	-12.419	13.011	9.581	23.547
8	.0135	.015	51.43	80.66	.520	.484	-12.206	13.223	9.868	25.534
9	.0157	.018	52.95	80.04	.535	.511	-11.813	13.616	10.416	29.686
10	.0173	.020	55.41	79.97	.546	.514	-11.541	13.888	10.478	32.705
11	.0197	.022	55.49	79.50	.556	.535	-11.303	14.126	10.895	37.234
12	.0212	.024	55.66	79.34	.563	.542	-11.117	14.312	11.038	40.065
13	.0223	.025	55.65	79.16	.567	.550	-11.016	14.413	11.196	42.141
14	.0249	.028	56.90	78.99	.575	.557	-10.798	14.631	11.346	47.048
15	.0267	.030	57.53	78.61	.582	.574	-10.637	14.792	11.685	50.445
16	.0287	.032	58.05	78.38	.587	.583	-10.503	14.927	11.885	54.219
17	.0302	.034	58.28	78.31	.589	.586	-10.444	14.985	11.948	57.050
18	.0366	.041	59.69	78.07	.604	.597	-10.060	15.349	12.164	68.939
19	.0435	.049	61.58	77.65	.623	.615	-9.596	15.833	12.531	82.150
20	.0503	.057	62.72	77.22	.634	.634	-9.302	16.127	12.912	94.982
21	.0563	.063	63.66	76.91	.644	.647	-9.060	16.369	13.187	106.306
22	.0635	.072	64.82	76.68	.655	.657	-8.763	16.666	13.393	119.893
23	.0705	.079	65.69	76.47	.664	.667	-8.538	16.891	13.581	133.104
24	.0763	.086	66.69	76.31	.674	.674	-8.283	17.146	13.724	144.049
25	.0835	.094	67.24	76.06	.680	.684	-8.141	17.288	13.943	157.637
26	.0904	.102	68.11	75.91	.689	.691	-7.917	17.512	14.079	170.659
27	.0963	.109	68.70	75.78	.695	.697	-7.766	17.663	14.195	181.793
28	.1037	.117	69.68	75.54	.705	.707	-7.513	17.916	14.407	195.759
29	.1103	.124	70.27	75.52	.711	.708	-7.360	18.069	14.424	208.214
30	.1165	.131	70.94	75.43	.717	.712	-7.190	18.239	14.498	219.915
31	.1235	.139	71.50	75.23	.723	.721	-7.045	18.384	14.680	233.125
32	.1305	.147	71.86	75.09	.727	.726	-6.952	18.478	14.800	246.335
33	.1473	.166	73.26	74.74	.741	.742	-6.592	18.837	15.113	278.040
34	.1651	.186	74.63	74.46	.755	.754	-6.239	19.190	15.363	311.632
35	.1826	.206	75.93	74.17	.768	.767	-5.905	19.525	15.620	344.658
36	.2003	.226	77.14	73.93	.780	.777	-5.595	19.834	15.826	378.061
37	.2173	.245	78.12	73.72	.790	.786	-5.342	20.087	16.016	410.144
38	.2353	.265	78.95	73.50	.798	.796	-5.126	20.301	16.214	444.113
39	.2524	.285	80.00	73.28	.809	.805	-4.860	20.570	16.401	476.384
40	.2706	.305	81.10	72.90	.820	.822	-4.576	20.853	16.744	510.731
41	.2874	.324	82.11	72.79	.830	.827	-4.317	21.112	16.840	542.436
42	.3053	.344	82.59	72.73	.835	.829	-4.193	21.237	16.892	576.217
43	.3535	.398	85.24	72.08	.862	.857	-3.513	21.916	17.467	667.179
44	.4013	.452	87.33	71.71	.883	.874	-2.974	22.455	17.797	757.387
45	.4495	.507	89.20	71.22	.902	.895	-2.495	22.954	18.226	848.350
46	.4973	.561	90.93	70.92	.919	.908	-2.048	23.381	18.495	938.558
47	.5453	.615	92.53	70.58	.936	.923	-1.636	23.793	18.801	1029.143
48	.5937	.669	93.93	70.15	.950	.941	-1.278	24.152	19.175	1120.488
49	.6414	.723	96.23	69.92	.963	.951	-0.943	24.486	19.382	1210.502
50	.6894	.777	95.94	69.65	.970	.963	-0.759	24.670	19.619	1301.088
51	.7375	.831	96.86	69.44	.979	.972	-0.524	24.905	19.804	1391.862
52	.7855	.885	97.52	69.26	.986	.980	-0.353	25.076	19.966	1482.447
53	.8338	.940	97.82	69.04	.989	.990	-0.208	25.152	20.159	1573.598
54	.8815	.994	98.24	69.11	.993	.987	-0.170	25.259	20.104	1663.617
55	.9243	1.047	98.43	69.00	.995	.991	-0.119	25.310	20.198	1753.825
56	.9775	1.102	98.66	68.95	.998	.994	-0.061	25.368	20.242	1844.788
57	1.0253	1.156	98.79	68.90	.999	.996	-0.029	25.400	20.286	1934.996
58	1.0735	1.210	98.85	68.87	1.000	.997	-0.014	25.416	20.315	2025.959
59	1.1215	1.264	98.86	68.84	1.000	.998	-0.005	25.426	20.338	2116.544
60	1.1694	1.316	98.91	68.78	1.000	1.000	0.004	25.430	20.389	2206.940
61	1.2175	1.372	98.90	68.80	1.000	1.000	0.000	25.435	20.377	2297.714
62	1.2654	1.426	98.90	68.81	1.000	1.000	0.001	25.437	20.368	2386.141
63	1.3131	1.480	98.93	68.80	1.000	1.000	0.007	25.447	20.379	2478.130
64	1.3613	1.534	98.97	68.79	1.000	1.000	0.018	25.444	20.385	2569.093
65	1.4097	1.589	98.95	68.79	1.000	1.000	0.014	25.444	20.428	2660.433
66	1.4571	1.642	98.94	68.82	1.000	1.000	0.003	25.444	20.358	2749.886
67	1.5057	1.697	98.89	68.79	1.000	1.000	-0.003	25.444	20.385	2841.603
68	1.5215	2.166	98.89	68.78	1.000	1.000	-0.003	25.444	20.385	3262.298
69	1.5385	2.636	98.95	68.80	1.000	1.000	-0.020	25.444	20.419	3413.258
70	1.5755	3.106	98.86	68.79	1.000	1.000	-0.009	25.444	20.383	3520.218
71	1.6175	3.575	98.82	68.84	1.000	1.000	-0.020	25.444	20.383	35985.290
72	1.6588	4.045	98.89	68.82	1.000	1.000	-0.001	25.444	20.353	6772.816
73	4.0056	4.515	98.87	68.82	1.000	1.000	-0.008	25.421	20.358	7559.398

Table 42.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 17. GRID NO. 2

BOUNDARY LAYER PROPERTIES

		STANDARD INTERPOLATION TO WALL	SUBLAYER FUNCTION FROM WALL TO $Y^+ = 35$
FREE STREAM VELOCITY	=	98.487	98.487
FREE STREAM TEMPERATURE	=	69.224	
WALL TEMPERATURE	=	93.320	
WALL HEAT FLUX	=	.07701	
FREE STREAM DENSITY	=	.07656	
KINEMATIC VISCOSITY	=	.0001595	
DENSITY OF FLUID AT WALL	=	.07323	
KINEMATIC VISCOSITY OF FLUID AT WALL	=	.0001726	
WALL/FREE STREAM DENSITY RATIO	=	.95643	
LOCATION REYNOLDS NUMBER (REX)	=	3097732.19	
INPUT VALUE OF VELOCITY DELTA	=	1.28000	
INPUT VALUE OF TEMPERATURE DELTA	=	1.37000	
CALCULATED DELTA	=		1.01568
DELTA 99.5% INPUT	=	.00000	
DISPLACEMENT THICKNESS (DELSTAR)	=	.14522	.14522
MOMENTUM THICKNESS (THETA)	=	.10297	.10324
ENERGY-DISSIPATION THICKNESS	=	.18365	.18386
ENTHALPY THICKNESS	=	.00486	.00486
SHAPE FACTOR 12 (DELSTAR/THETA)	=	1.41034	1.40660
SHAPE FACTOR 32 (ENERGY/THETA)	=	1.76353	1.78083
MOMENTUM THICKNESS REYNOLDS NUMBER	=	5298.57	5312.58
DISPLACEMENT THICKNESS REYNOLDS NUMBER	=	7472.80	7472.70
SKIN FRICTION COEFFICIENT	=	.002871	
FRICTION VELOCITY	=	3.81584	
LAW OF THE WALL CONSTANT (K)	=	.41000	
LAW OF THE WALL CONSTANT (C)	=	5.00000	
WAKE STRENGTH	=		.49878
CLAUSERS 'DELTA' INTEGRAL	=	-3.44412	-3.62274
CLAUSERS 'G' INTEGRAL	=	24.23917	24.04294
DISPLACEMENT THICKNESS - CONSTANT DENSITY	=	.13691	.14036
MOMENTUM THICKNESS - CONSTANT DENSITY	=	.10398	.10427
SHAPE FACTOR 12 - CONSTANT DENSITY	=	1.31660	1.34614

LOCATION -X- 60.20000

Z = +6 INCHES

Table 43.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 17. GRID NO. 2

REDUCED PROFILE DATA

N	INCHES	Y'	U	T	U/UE	THETA	UTAU	U(+)	T(+)	V(+)
1	.0069	.007	38.62	85.02	.392	.344	-15.688	10.122	7.227	12.770
2	.0081	.008	41.43	84.11	.421	.382	-14.952	10.858	8.020	14.981
3	.0091	.009	44.05	83.52	.447	.407	-14.266	11.544	8.536	16.823
4	.0100	.010	45.76	83.26	.465	.417	-13.817	11.993	8.758	18.482
5	.0111	.011	47.04	82.79	.478	.437	-13.482	12.328	9.171	20.509
6	.0127	.013	49.20	82.11	.500	.465	-12.916	12.894	9.766	23.457
7	.0139	.014	50.19	81.54	.510	.478	-12.657	13.153	10.026	25.668
8	.0149	.015	50.84	81.05	.516	.489	-12.487	13.323	10.257	27.511
9	.0173	.017	52.50	81.05	.533	.509	-12.052	13.758	10.685	31.933
10	.0191	.019	53.33	80.57	.541	.529	-11.835	13.975	11.104	35.250
11	.0214	.021	54.30	80.30	.551	.541	-11.579	14.230	11.342	39.488
12	.0227	.022	54.77	80.12	.556	.548	-11.457	14.353	11.496	41.883
13	.0244	.024	55.33	79.85	.562	.559	-11.296	14.514	11.730	45.016
14	.0261	.026	55.94	79.84	.568	.559	-11.149	14.661	11.739	48.148
15	.0284	.028	56.54	79.60	.574	.568	-10.993	14.817	11.944	52.386
16	.0305	.030	57.13	79.40	.580	.578	-10.838	14.972	12.118	56.256
17	.0317	.031	57.36	79.32	.582	.581	-10.777	15.033	12.192	58.467
18	.0383	.038	59.14	78.98	.600	.599	-10.312	15.498	12.577	70.629
19	.0452	.045	60.24	78.34	.612	.622	-10.024	15.786	13.046	83.343
20	.0523	.052	61.57	78.07	.625	.633	-9.676	16.134	13.278	96.426
21	.0563	.057	62.57	77.87	.635	.641	-9.412	16.398	13.453	107.481
22	.0653	.064	63.79	77.55	.648	.654	-9.092	16.718	13.732	120.380
23	.0722	.071	64.66	77.31	.657	.664	-8.865	16.945	13.939	133.094
24	.0785	.077	65.29	77.14	.663	.672	-8.701	17.109	14.092	144.703
25	.0852	.084	66.05	76.93	.671	.680	-8.501	17.308	14.269	157.049
26	.0922	.091	66.87	76.78	.679	.687	-8.285	17.525	14.406	169.947
27	.0981	.097	67.60	76.65	.686	.692	-8.095	17.715	14.517	180.819
28	.1055	.104	68.11	76.43	.692	.701	-7.960	17.849	14.706	194.454
29	.1122	.110	68.81	76.36	.699	.703	-7.778	18.032	14.753	206.800
30	.1182	.116	69.47	76.32	.705	.706	-7.604	18.206	14.803	217.856
31	.1249	.123	70.01	76.04	.711	.717	-7.463	18.347	15.050	230.202
32	.1322	.130	70.52	75.76	.716	.729	-7.329	18.481	15.293	243.653
33	.1491	.147	71.92	75.60	.730	.736	-6.963	18.847	15.433	274.794
34	.1668	.164	72.99	75.01	.741	.760	-6.683	19.127	15.947	307.408
35	.1843	.181	74.12	75.00	.753	.760	-6.386	19.424	15.955	339.655
36	.2023	.199	75.29	74.66	.764	.774	-6.078	19.731	16.249	372.822
37	.2194	.216	76.23	74.26	.774	.790	-5.833	19.977	16.576	377.331
38	.2372	.234	77.33	74.24	.785	.792	-5.545	20.265	16.617	437.131
39	.2543	.250	78.32	74.06	.795	.799	-5.285	20.525	16.775	468.640
40	.2721	.268	79.04	73.95	.803	.804	-5.096	20.713	16.869	501.439
41	.2893	.285	79.88	73.81	.811	.810	-4.876	20.933	16.989	533.132
42	.3073	.303	80.77	73.44	.820	.820	-4.642	21.168	17.314	566.300
43	.3551	.350	82.72	73.14	.840	.838	-4.131	21.679	17.576	654.378
44	.4033	.397	84.71	72.65	.860	.858	-3.611	21.999	17.996	743.194
45	.4513	.444	86.66	72.34	.880	.871	-3.099	22.711	18.272	831.641
46	.4993	.492	88.24	71.85	.896	.891	-2.685	23.125	18.697	920.088
47	.5469	.538	69.78	71.46	.912	.907	-2.282	23.528	19.040	1007.798
48	.5955	.586	91.45	71.20	.929	.918	-1.845	23.965	19.260	1097.350
49	.6431	.633	92.50	70.83	.939	.933	-1.569	24.241	19.581	1185.060
50	.6909	.680	93.71	70.63	.952	.941	-1.251	24.559	19.755	1273.138
51	.7393	.728	94.71	70.28	.962	.956	-0.991	24.814	20.066	1362.322
52	.7870	.775	95.56	70.14	.970	.962	-0.766	25.044	20.182	1450.216
53	.8349	.822	96.33	69.88	.978	.973	-0.565	25.245	20.412	1538.479
54	.8831	.869	96.79	69.80	.983	.976	-0.444	25.365	20.479	1627.295
55	.9311	.917	97.27	69.68	.988	.981	-0.319	25.491	20.588	1715.742
56	.9789	.964	97.63	69.56	.991	.986	-0.225	25.585	20.686	1803.820
57	1.0273	1.011	97.95	69.51	.995	.988	-0.139	25.671	20.733	1893.004
58	1.0749	1.058	98.07	69.45	.996	.991	-0.109	25.701	20.787	1980.714
59	1.1230	1.106	98.18	69.32	.997	.996	-0.080	25.730	20.900	2069.345
60	1.1711	1.153	98.27	69.31	.998	.996	-0.057	25.753	20.909	2157.976
61	1.2193	1.201	98.35	69.33	.999	.996	-0.036	25.774	20.891	2246.792
62	1.2669	1.247	98.44	69.25	1.000	.999	-0.012	25.798	20.961	2334.501
63	1.3148	1.295	98.51	69.21	1.000	.999	-0.005	25.815	20.953	2422.764
64	1.3633	1.342	98.45	69.21	1.000	1.001	-0.009	25.801	20.994	2512.132
65	1.4111	1.389	98.50	69.23	1.000	1.000	-0.004	25.814	20.980	2600.211
66	1.4568	1.436	98.45	69.22	1.000	1.000	-0.010	25.800	20.985	2688.105
67	1.5070	1.484	98.52	69.22	1.000	1.000	-0.010	25.820	20.985	2776.920
68	1.5232	1.894	98.45	69.19	1.000	1.001	-0.009	25.801	21.009	3543.829
69	2.3403	2.304	98.47	69.17	1.000	1.002	-0.005	25.805	21.029	4312.396
70	2.7573	2.715	98.44	69.20	1.000	1.001	-0.011	25.799	21.004	5080.779
71	3.1730	3.124	98.49	69.20	1.000	1.001	-0.001	25.811	21.004	5846.766
72	3.5903	3.535	98.51	69.21	1.000	1.001	-0.007	25.817	20.994	6615.701
73	4.0070	3.945	98.49	69.27	1.000	0.998	0.002	25.812	20.940	7383.531

Table 43.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 18. GRID NO. 2

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO Y+ = 35
FREE STREAM VELOCITY =	98.488	98.488
FREE STREAM TEMPERATURE =	69.395	
WALL TEMPERATURE =	93.500	
WALL HEAT FLUX =	.07709	
FREE STREAM DENSITY =	.07654	
FREE STREAM KINEMATIC VISCOSITY =	.0001596	
DENSITY OF FLUID AT WALL =	.07320	
KINEMATIC VISCOSITY OF FLUID AT WALL =	.0001727	
WALL/FREE STREAM DENSITY RATIO =	.95642	
LOCATION REYNOLDS NUMBER (REX) =	3096018.69	
INPUT VALUE OF VELOCITY DELTA =	1.25000	
INPUT VALUE OF TEMPERATURE DELTA =	1.25000	
CALCULATED DELTA =		1.01017
DELTA 99.5% INPUT =	.00000	
DISPLACEMENT THICKNESS (DELSTAR) =	.14473	.14459
MOMENTUM THICKNESS (THETA) =	.10257	.10294
ENERGY-DISSIPATION THICKNESS =	.18290	.18323
ENTHALPY THICKNESS =	.00449	.00451
SHAPE FACTOR 12 (DELSTAR/THETA) =	1.41101	1.40455
SHAPE FACTOR 32 (ENERGY/THETA) =	1.78314	1.77993
MOMENTUM THICKNESS REYNOLDS NUMBER =	5275.08	5294.28
DISPLACEMENT THICKNESS REYNOLDS NUMBER =	7443.21	7436.09
SKIN FRICTION COEFFICIENT =	.002873	
FRICTION VELOCITY =	3.81720	
LAW OF THE WALL CONSTANT (K) =	.41000	
LAW OF THE WALL CONSTANT (C) =	5.00000	
WAKE STRENGTH =		.49982
CLAUSERS 'DELTA' INTEGRAL =	-3.41363	-3.61429
CLAUSERS 'G' INTEGRAL =	24.42372	24.06157
DISPLACEMENT THICKNESS - CONSTANT DENSITY =	.13627	.14008
MOMENTUM THICKNESS - CONSTANT DENSITY =	.10355	.10394
SHAPE FACTOR 12 - CONSTANT DENSITY =	1.31603	1.34775
LOCATION -X- =	60.20000	
Z = -6 INCHES		

Table 44.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79
 RUN NO. 7. POINT 18. GRID NO. 2

REDUCED PPOFILE DATA

N	Y INCHES	Y/	U	T	U-UE	UTAU	U(+)	T(+)	Y(+)
	INCHES	DELTA	FT/SEC	DEG.F	U/UE	THETA	U(+)	T(+)	Y(+)
1	.0079	.008	40.96	84.11	.416	.390	-15.071	10.730	8.168
2	.0089	.009	42.75	83.47	.434	.416	-14.601	11.200	8.129
3	.0103	.010	45.53	82.86	.462	.441	-13.874	11.927	9.256
4	.0110	.011	46.52	82.63	.472	.451	-13.613	12.188	9.457
5	.0119	.012	47.80	82.31	.485	.461	-13.279	12.522	9.736
6	.0138	.014	49.90	81.83	.507	.484	-12.436	13.072	10.150
7	.0153	.015	51.02	81.46	.518	.499	-12.323	13.366	10.473
8	.0160	.016	51.45	81.31	.522	.506	-12.323	13.478	10.602
9	.0179	.018	52.77	80.99	.536	.519	-11.976	13.826	10.881
10	.0201	.020	53.63	80.49	.544	.540	-11.753	14.048	11.314
11	.0222	.022	54.57	80.44	.554	.542	-11.505	14.296	11.365
12	.0237	.023	55.51	80.26	.559	.549	-11.390	14.412	11.519
13	.0251	.025	55.49	79.94	.563	.563	-11.265	14.536	11.800
14	.0269	.027	55.97	79.75	.568	.570	-11.138	14.663	11.958
15	.0293	.029	56.81	79.56	.577	.578	-10.919	14.883	12.129
16	.0312	.031	57.37	79.42	.583	.584	-10.772	15.029	12.246
17	.0328	.032	57.60	79.32	.585	.588	-10.711	15.090	12.339
18	.0341	.034	59.06	78.81	.600	.610	-10.323	15.478	12.783
19	.0461	.046	60.44	78.28	.614	.631	-9.967	15.834	13.242
20	.0530	.052	61.81	78.02	.628	.642	-9.609	16.193	13.463
21	.0590	.058	62.93	77.89	.638	.648	-9.343	16.459	13.582
22	.0659	.065	63.64	77.71	.646	.655	-9.129	16.672	13.733
23	.0731	.072	64.74	77.39	.657	.669	-8.841	16.961	14.019
24	.0791	.078	65.42	77.15	.664	.678	-8.664	17.137	14.227
25	.0859	.085	66.46	76.94	.675	.687	-8.391	17.410	14.404
26	.0933	.092	66.92	76.75	.679	.695	-8.269	17.532	14.570
27	.0991	.098	67.59	76.64	.686	.699	-8.095	17.706	14.666
28	.1063	.105	68.14	76.39	.692	.710	-7.951	17.850	14.886
29	.1131	.112	69.09	76.25	.701	.716	-7.702	18.099	15.008
30	.1190	.118	69.46	76.18	.705	.719	-7.603	18.198	15.072
31	.1261	.125	69.96	76.00	.710	.726	-7.474	18.327	15.224
32	.1331	.132	70.57	75.82	.717	.733	-7.313	18.489	15.379
33	.1501	.149	71.71	75.60	.728	.742	-7.016	18.785	15.568
34	.1677	.166	73.33	75.43	.745	.750	-6.591	19.211	15.723
35	.1849	.183	74.04	75.05	.752	.765	-6.406	19.395	16.047
36	.2C31	.2C1	75.34	74.67	.765	.781	-6.065	19.736	16.378
37	.2199	.218	76.24	74.33	.774	.795	-5.828	19.973	16.677
38	.2381	.236	77.13	74.35	.783	.794	-5.595	20.206	16.656
39	.2551	.253	78.14	74.24	.793	.799	-5.331	20.470	16.752
40	.2729	.270	78.94	73.83	.802	.816	-5.120	20.681	17.109
41	.2902	.287	79.96	73.71	.812	.821	-4.854	20.947	17.218
42	.3061	.305	80.51	73.33	.817	.837	-4.711	21.091	17.550
43	.3562	.353	82.91	72.98	.842	.851	-4.081	21.720	17.849
44	.4039	.400	84.83	72.61	.861	.867	-3.578	22.223	18.175
45	.4521	.448	86.74	72.08	.881	.889	-3.078	22.723	18.635
46	.5003	.495	88.35	71.73	.897	.903	-2.656	23.145	18.936
47	.5479	.542	89.85	71.43	.912	.916	-2.263	23.539	19.199
48	.5963	.590	91.33	71.01	.927	.933	-1.875	23.926	19.563
49	.6430	.637	92.74	70.90	.942	.937	-1.505	24.296	19.657
50	.6920	.685	93.78	70.62	.952	.949	-1.234	24.567	19.902
51	.7400	.733	94.82	70.38	.963	.959	-0.962	24.839	20.114
52	.7880	.780	95.59	70.04	.971	.973	-0.760	25.041	20.405
53	.8359	.828	96.35	69.98	.978	.976	-0.560	25.242	20.459
54	.8841	.875	96.92	69.87	.984	.981	-0.410	25.391	20.559
55	.9320	.923	97.33	69.73	.988	.986	-0.302	25.499	20.677
56	.9799	.970	97.63	69.65	.991	.991	-0.224	25.577	20.789
57	1.0261	1.018	97.95	69.47	.995	.997	-0.141	25.660	20.901
58	1.0759	1.065	98.09	69.44	.996	.998	-0.105	25.696	20.932
59	1.1239	1.113	98.25	69.42	.998	.999	-0.063	25.738	20.945
60	1.1722	1.160	98.39	69.40	.999	1.000	-0.025	25.776	20.962
61	1.2201	1.206	98.43	69.36	.999	1.002	-0.016	25.785	21.002
62	1.2683	1.256	98.43	69.34	.999	1.002	-0.015	25.786	21.014
63	1.3158	1.303	98.46	69.45	1.000	0.998	-0.007	25.795	21.026
64	1.3639	1.350	98.57	69.39	1.000	1.000	0.000	25.823	21.079
65	1.4120	1.398	98.55	69.39	1.000	1.000	0.000	25.822	21.244
66	1.4597	1.445	98.56	69.41	1.000	1.000	0.000	25.820	21.689
67	1.5079	1.493	98.55	69.40	1.000	1.000	0.000	25.817	20.970
68	1.59241	1.505	98.57	69.38	1.000	1.000	0.000	25.822	20.979
69	2.3409	2.317	98.52	69.37	1.000	1.000	0.000	25.811	20.993
70	2.7579	2.730	98.63	69.39	1.000	1.000	0.000	25.839	20.974
71	3.1742	3.142	98.61	69.39	1.000	1.000	0.000	25.834	20.974
72	3.5911	3.555	98.68	69.43	1.000	1.000	0.000	25.851	20.939
73	4.0060	3.968	98.64	69.44	1.000	0.998	0.039	25.840	20.935

Table 44.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 20. GRID NO. 2

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION	STANDARD SUBLAYER FUNCTION FROM TO WALL	STANDARD FUNCTION FROM WALL TO $y+=35$
FREE STREAM VELOCITY	= 98.701		98.701
FREE STREAM TEMPERATURE	= 69.924		
WALL TEMPERATURE	= 94.910		
WALL HEAT FLUX	= .07621		
FREE STREAM DENSITY	= .07626		
FREE STREAM KINEMATIC VISCOSITY	= .0001603		
DENSITY OF FLUID AT WALL	= .07283		
KINEMATIC VISCOSITY OF FLUID AT WALL	= .0001739		
WALL/FREE STREAM DENSITY RATIO	= .95495		
LOCATION REYNOLDS NUMBER (REX)	= 3906010.28		
INPUT VALUE OF VELOCITY DELTA	= 1.46000		
INPUT VALUE OF TEMPERATURE DELTA	= 1.61000		
CALCULATED DELTA			1.26107
DELTA 99.5% INPUT	= .00000		
DISPLACEMENT THICKNESS (DELSTAR)	= .17474		.17468
MOMENTUM THICKNESS (THETA)	= .12459		.12491
ENERGY-DISSIPATION THICKNESS	= .22258		.22284
ENTHALPY THICKNESS	= .00617		.00618
SHAPE FACTOR 12 (DELSTAR/THETA)	= 1.40254		1.39846
SHAPE FACTOR 32 (ENERGY/THETA)	= 1.78655		1.78405
MOMENTUM THICKNESS REYNOLDS NUMBER	= 6392.96		6409.56
DISPLACEMENT THICKNESS REYNOLDS NUMBER	= 8966.38		8963.54
SKIN FRICTION COEFFICIENT	= .002788		
FRICTION VELOCITY	= 3.77112		
LAW OF THE WALL CONSTANT (K)	= .41000		
LAW OF THE WALL CONSTANT (C)	= 5.00000		
WAKE STRENGTH			.47472
CLAUSERS 'DELTA' INTEGRAL	= -4.21251		-4.41046
CLAUSERS 'G' INTEGRAL	= 29.27316		28.99472
DISPLACEMENT THICKNESS - CONSTANT DENSITY	= .16476		.16851
MOMENTUM THICKNESS - CONSTANT DENSITY	= .12585		.12619
SHAPE FACTOR 12 - CONSTANT DENSITY	= 1.30925		1.33543
LOCATION -X-	76.12000		
Z = CENTERLINE			

Table 45.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79
 RUN NO. 7. POINT 2D. GRID NO. 2

REDUCED PROFILE DATA

N	Y/ INCHES	Y/ DELT A	U/ FT/SEC	T/ DEG.F	U/UE	THE T A	U-UE	U(+)	T(+)	Y(+)
1	.0076	.006	39.57	85.97	.401	.358	-15.680	10.493	7.729	13.788
2	.0087	.007	41.67	85.31	.424	.384	-15.071	11.102	8.302	15.776
3	.0096	.008	44.02	84.00	.446	.406	-14.499	11.674	8.771	17.402
4	.0108	.009	45.81	84.23	.464	.427	-14.026	12.147	9.238	19.571
5	.0116	.009	46.97	83.95	.476	.439	-13.717	12.456	9.479	21.017
6	.0134	.011	48.92	83.39	.496	.461	-13.201	12.972	9.961	24.269
7	.0146	.012	49.73	83.05	.504	.475	-12.966	13.187	10.261	26.438
8	.0156	.012	50.98	82.76	.517	.486	-12.654	13.519	10.511	28.245
9	.0180	.014	51.91	82.17	.526	.510	-12.408	13.765	11.020	32.582
10	.0200	.016	53.01	82.05	.537	.515	-12.115	14.058	11.123	36.196
11	.0216	.017	53.41	81.70	.541	.529	-12.010	14.163	11.428	39.088
12	.0234	.019	54.15	81.34	.549	.543	-11.814	14.359	11.737	42.340
13	.0248	.020	54.75	81.30	.555	.545	-11.665	14.518	11.771	44.870
14	.0268	.021	55.25	81.23	.560	.548	-11.523	14.650	11.834	48.485
15	.0266	.023	56.11	81.09	.566	.553	-11.294	14.879	11.956	51.737
16	.0310	.025	56.60	80.83	.573	.564	-11.163	15.010	12.178	56.074
17	.0325	.026	57.04	80.65	.578	.571	-11.047	15.126	12.337	58.785
18	.0340	.031	58.42	79.92	.582	.600	-10.681	15.491	12.964	70.531
19	.0462	.037	59.61	79.75	.604	.607	-10.367	15.806	13.114	83.542
20	.0529	.042	60.98	79.38	.618	.622	-10.002	16.171	13.432	95.650
21	.0590	.047	61.78	79.26	.626	.626	-9.790	16.383	13.531	106.673
22	.0657	.052	62.93	78.83	.638	.644	-9.486	16.686	13.908	118.781
23	.0728	.056	63.52	78.69	.644	.649	-9.329	16.844	14.028	131.611
24	.0790	.063	64.65	78.55	.655	.655	-9.030	17.142	14.148	142.815
25	.0858	.068	65.28	78.23	.661	.668	-8.863	17.310	14.426	155.104
26	.0931	.074	65.99	78.02	.669	.676	-8.675	17.498	14.606	168.296
27	.0986	.078	66.29	77.98	.672	.678	-8.595	17.578	14.641	178.235
28	.1056	.084	67.15	77.83	.680	.684	-8.367	17.806	14.770	190.884
29	.1130	.090	67.65	77.59	.685	.693	-8.233	17.940	14.978	204.257
30	.1190	.094	68.15	77.45	.690	.699	-8.102	18.071	15.100	221.749
31	.1260	.100	68.78	77.37	.697	.702	-7.934	18.239	15.168	227.749
32	.1332	.106	69.28	77.26	.702	.706	-7.802	18.371	15.261	240.760
33	.1498	.119	70.51	76.96	.714	.719	-7.476	18.697	15.528	270.758
34	.1674	.133	71.74	76.69	.727	.729	-7.149	19.024	15.760	302.563
35	.1847	.146	72.47	76.43	.734	.740	-6.957	19.216	15.985	333.826
36	.2031	.161	73.80	76.04	.748	.755	-6.602	19.571	16.322	367.077
37	.2197	.174	74.52	75.83	.755	.764	-6.412	19.761	16.502	397.075
38	.2380	.189	75.14	75.75	.761	.767	-6.246	19.926	16.572	430.145
39	.2553	.202	76.15	75.53	.772	.776	-5.979	20.194	16.763	461.408
40	.2732	.217	77.01	75.31	.780	.784	-5.752	20.421	16.952	493.755
41	.2898	.230	77.71	75.08	.787	.794	-5.565	20.608	17.154	523.753
42	.3077	.244	78.57	74.99	.796	.797	-5.388	20.835	17.229	556.100
43	.3595	.285	80.42	74.42	.815	.820	-4.848	21.325	17.718	649.708
44	.4108	.326	82.45	74.20	.825	.829	-4.309	21.864	17.911	742.412
45	.4632	.367	84.06	73.54	.852	.855	-3.883	22.290	18.484	837.104
46	.5150	.408	85.89	73.17	.870	.870	-3.398	22.775	18.799	930.712
47	.5672	.450	87.36	72.96	.885	.879	-3.001	23.172	18.988	1025.043
48	.6193	.491	88.70	72.52	.899	.896	-2.653	23.520	19.363	1119.193
49	.6705	.532	90.12	72.26	.913	.907	-2.276	23.896	19.590	1211.717
50	.7225	.573	91.49	71.98	.927	.918	-1.913	24.260	19.834	1305.686
51	.7737	.614	92.47	71.75	.937	.927	-1.653	24.520	20.030	1398.210
52	.8256	.655	93.70	71.54	.949	.935	-1.325	24.848	20.210	1491.999
53	.8776	.696	94.57	71.17	.958	.950	-1.095	25.078	20.529	1585.968
54	.9301	.738	95.44	71.00	.967	.957	-8.64	25.309	20.680	1680.841
55	.9816	.778	95.98	70.81	.972	.964	-7.21	25.452	20.842	1773.907
56	1.0334	.819	96.60	70.77	.979	.966	-5.557	25.616	20.880	1867.515
57	1.0848	.860	97.13	70.52	.984	.976	-4.417	25.756	21.097	1960.400
58	1.1372	.902	97.55	70.41	.988	.981	-3.306	25.867	21.392	2055.092
59	1.1890	.943	97.75	70.34	.990	.983	-2.251	25.922	21.525	2148.700
60	1.2409	.984	97.99	70.21	.993	.989	-1.188	25.985	21.365	2242.489
61	1.2926	1.025	98.26	70.22	.996	.988	-1.116	26.057	21.357	2335.916
62	1.3446	1.066	98.38	70.13	.997	.992	-0.86	26.087	21.430	2429.885
63	1.3965	1.107	98.54	70.11	.998	.993	-0.42	26.131	21.450	2523.674
64	1.4481	1.148	98.66	70.03	1.000	.996	-0.010	26.163	21.519	2616.920
65	1.5000	1.189	98.60	70.00	1.000	.999	-0.027	26.146	21.542	2710.709
66	1.5520	1.231	98.71	69.97	1.000	.998	-0.03	26.176	21.572	2804.678
67	1.6038	1.272	98.79	69.92	1.000	1.000	-0.024	26.197	21.61	2898.286
68	1.6556	1.313	98.75	69.90	1.000	1.001	-0.013	26.186	21.632	2991.894
69	1.7078	1.354	98.82	69.97	1.000	1.000	-0.032	26.205	21.571	3086.225
70	2.0908	1.658	98.83	69.91	1.000	1.001	-0.035	26.208	21.626	3778.346
71	2.4742	1.962	98.80	69.89	1.000	1.001	-0.025	26.198	21.640	3471.189
72	2.8576	2.266	98.77	69.90	1.000	1.001	-0.019	26.191	21.630	5164.032
73	3.2468	2.570	98.72	69.89	1.000	1.001	-0.005	26.178	21.640	5856.514
74	3.6239	2.874	98.79	69.86	1.000	1.003	-0.023	26.195	21.664	6548.816
75	4.0082	3.178	98.85	69.88	1.002	1.002	-0.039	26.212	21.644	7243.285

Table 45.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 22. GRID NO. 2

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	SUBLAYER FUNCTION FROM WALL TO $Y+ = 35$	STANDARD
FREE STREAM VELOCITY	= 99.029		99.029
FREE STREAM TEMPERATURE	= 70.362		
WALL TEMPERATURE	= 95.150		
WALL HEAT FLUX	= .07618		
FREE STREAM DENSITY	= .07620		
KINEMATIC VISCOSITY	= .0001605		
DENSITY OF FLUID AT WALL	= .07279		
KINEMATIC VISCOSITY OF FLUID AT WALL	= .0001740		
WALL/FREE STREAM DENSITY RATIO	= .95532		
LOCATION REYNOLDS NUMBER (REX)	= 3916335.69		
INPUT VALUE OF VELOCITY DELTA	= 1.46000		
INPUT VALUE OF TEMPERATURE DELTA	= 1.46000		
CALCULATED DELTA			1.25258
DELTA 99.5% INPUT	= .00000		
DISPLACEMENT THICKNESS (DELSTAR)	= .17622		.17616
MOMENTUM THICKNESS (THETA)	= .12591		.12618
ENERGY-DISSIPATION THICKNESS	= .22485		.22507
ENTHALPY THICKNESS	= .00581		.00582
SHAPE FACTOR 12 (DELSTAR/THETA)	= 1.39963		1.39603
SHAPE FACTOR 32 (ENERGY/THETA)	= 1.78580		1.78369
MOMENTUM THICKNESS REYNOLDS NUMBER	= 6472.77		6486.96
DISPLACEMENT THICKNESS REYNOLDS NUMBER	= 9059.48		9055.97
SKIN FRICTION COEFFICIENT	= .002763		
FRICTION VELOCITY	= 3.76592		
LAW OF THE WALL CONSTANT (K)	= .41000		
LAW OF THE WALL CONSTANT (C)	= 5.00000		
WAKE STRENGTH			.50443
CLAUSERS 'DELTA' INTEGRAL	= -4.29370		-4.47914
CLAUSERS 'G' INTEGRAL	= 29.92349		29.66955
DISPLACEMENT THICKNESS - CONSTANT DENSITY	= .16685		.17033
MOMENTUM THICKNESS - CONSTANT DENSITY	= .12714		.12743
SHAPE FACTOR 12 - CONSTANT DENSITY	= 1.31233		1.33672

LOCATION -X- 76.18001

Z = -6 INCHES

Table 46.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 22. GRID NO. 2

REDUCED PROFILE DATA

	Y INCHES	Y/ INCHES	U DELTA	FT/SEC	T DEG.F	U/UE	THETA	U-UE	U(+)	T(+)	Y(+)
N	.0071	.006	38.	.31	86.56	.367	.346	-16.123	10.173	7.416	12.857
1	.0083	.007	40.	.31	85.64	.407	.384	-15.591	10.705	8.215	15.021
2	.0097	.008	42.	.31	85.13	.433	.404	-14.903	11.393	8.657	17.545
3	.0106	.009	44.	.64	84.61	.451	.425	-14.441	11.855	9.107	19.168
4	.0116	.010	47.	.91	84.25	.469	.440	-13.972	12.324	9.417	20.972
5	.0130	.011	49.	.15	83.99	.484	.450	-13.574	12.722	9.637	23.496
6	.0143	.012	50.	.16	83.32	.496	.461	-13.244	13.052	9.859	25.840
7	.0156	.014	51.	.26	82.77	.507	.477	-12.976	13.320	10.213	28.185
8	.0173	.016	52.	.37	82.38	.518	.499	-12.685	13.612	10.693	31.250
9	.0195	.017	53.	.45	81.93	.529	.515	-12.389	13.907	11.026	35.217
10	.0214	.018	54.	.50	81.78	.540	.533	-12.102	14.194	11.415	38.643
11	.0230	.020	54.	.22	81.69	.546	.539	-11.942	14.354	11.545	41.529
12	.0245	.021	54.	.97	81.41	.548	.543	-11.899	14.397	11.621	44.233
13	.0267	.023	55.	.65	81.09	.556	.554	-11.700	14.597	11.864	48.200
14	.0285	.024	56.	.18	80.64	.567	.567	-11.519	14.777	12.144	51.446
15	.0303	.026	56.	.61	80.47	.572	.585	-11.379	14.917	12.534	54.692
16	.0320	.031	57.	.85	80.49	.584	.592	-11.264	15.032	12.679	57.758
17	.0338	.036	59.	.48	80.08	.601	.608	-10.933	15.363	12.663	69.298
18	.0355	.022	60.	.45	79.65	.610	.625	-10.502	15.794	13.015	82.101
19	.0352	.027	61.	.48	79.28	.621	.640	-9.970	16.053	13.389	94.363
20	.0523	.052	62.	.77	79.13	.634	.646	-9.628	16.326	13.710	105.543
21	.0655	.052	63.	.55	78.98	.642	.652	-9.420	16.876	13.965	130.608
22	.0655	.052	64.	.26	78.85	.649	.658	-9.233	17.064	14.077	141.067
23	.0724	.068	65.	.18	78.51	.658	.671	-8.988	17.306	14.372	153.509
24	.0782	.074	65.	.91	78.29	.666	.680	-8.795	17.501	14.557	166.312
25	.0851	.079	66.	.38	78.18	.670	.684	-8.670	17.626	14.652	177.312
26	.0922	.084	66.	.90	78.09	.676	.688	-8.530	17.766	14.735	189.935
27	.0983	.090	67.	.60	77.83	.683	.699	-8.346	17.950	14.961	202.557
28	.1053	.095	68.	.30	77.72	.690	.703	-8.161	18.135	15.054	213.557
29	.1123	.105	68.	.97	77.67	.696	.705	-7.991	18.305	15.093	225.819
30	.1184	.119	69.	.36	77.60	.701	.708	-7.872	18.424	15.160	236.261
31	.1252	.133	71.	.73	76.94	.724	.735	-7.250	19.046	15.725	301.014
32	.1321	.147	72.	.70	76.72	.734	.743	-6.991	19.305	15.914	332.571
33	.1493	.162	73.	.85	76.43	.746	.755	-6.687	19.610	16.171	364.849
34	.1669	.175	74.	.45	76.07	.752	.770	-6.526	19.771	16.482	396.045
35	.1844	.189	75.	.32	76.10	.761	.769	-6.297	19.999	16.456	427.962
36	.2023	.203	76.	.00	75.96	.767	.774	-6.116	20.180	16.577	459.158
37	.2196	.217	76.	.80	75.71	.776	.784	-5.903	20.393	16.791	490.714
38	.2373	.231	77.	.93	75.33	.787	.799	-5.603	20.693	17.114	522.091
39	.2546	.245	78.	.75	75.19	.795	.805	-5.385	20.911	17.240	553.828
40	.2721	.287	80.	.84	74.82	.816	.820	-4.830	21.466	17.556	647.235
41	.2895	.326	82.	.47	74.26	.833	.843	-4.398	21.898	18.038	740.282
42	.3071	.369	84.	.36	73.79	.852	.862	-3.890	22.407	18.444	834.050
43	.3569	.452	87.	.65	73.26	.869	.868	-3.445	22.851	18.573	927.097
44	.4105	.494	88.	.82	72.92	.897	.897	-2.710	23.275	18.906	1021.406
45	.4625	.535	90.	.39	72.52	.913	.913	-2.293	23.586	19.202	1115.535
46	.5141	.576	91.	.54	72.27	.924	.923	-1.990	24.003	19.545	1208.041
47	.5664	.618	92.	.60	72.10	.935	.930	-1.707	24.307	19.760	1301.809
48	.6186	.659	93.	.80	71.75	.947	.944	-1.388	24.590	20.205	1488.625
49	.6699	.701	94.	.74	71.61	.957	.949	-1.138	24.908	20.327	1882.393
50	.7219	.744	95.	.47	71.32	.964	.961	-0.944	25.158	20.577	1675.800
51	.7737	.783	96.	.20	71.10	.971	.970	-0.751	25.354	20.770	1769.208
52	.8255	.825	96.	.69	71.01	.976	.974	-0.621	25.675	20.845	1862.615
53	.8775	.866	97.	.23	70.83	.982	.981	-0.478	25.818	21.005	1955.662
54	.9293	.907	98.	.71	70.77	.987	.984	-0.350	25.946	21.060	2049.070
55	.9811	.949	98.	.02	70.60	.990	.990	-0.268	26.028	21.200	2143.559
56	1.0329	1.032	98.	.32	70.52	.993	.994	-0.188	26.108	21.275	2236.606
57	1.0845	1.073	98.	.57	70.42	.997	.998	-0.123	26.173	21.355	2330.375
58	1.1363	1.073	98.	.75	70.42	.997	.998	-0.073	26.223	21.365	2351.190
59	1.1887	1.073	99.	.18	70.32	1.000	1.000	-0.008	26.288	21.412	2609.696
60	1.2403	1.069	99.	.08	70.30	1.001	1.000	-0.008	26.288	21.405	2703.644
61	1.2923	1.063	99.	.12	70.33	1.000	1.001	-0.005	26.291	21.393	2797.413
62	1.3443	1.073	99.	.15	70.35	1.001	1.001	-0.003	26.309	21.426	2891.541
63	1.3959	1.114	99.	.80	70.41	1.000	1.000	-0.002	26.319	21.435	2985.310
64	1.4472	1.155	99.	.00	70.36	1.000	1.000	-0.002	26.336	21.440	3078.717
65	1.4993	1.197	99.	.00	70.37	1.000	1.000	-0.002	26.336	21.442	3099.696
66	1.5513	1.239	99.	.01	70.38	1.000	1.000	-0.002	26.336	21.445	3103.644
67	1.6035	1.280	99.	.08	70.34	1.000	1.001	-0.001	26.339	21.446	3107.413
68	1.6555	1.322	99.	.12	70.33	1.001	1.001	-0.001	26.340	21.447	3108.413
69	1.7073	1.363	99.	.15	70.35	1.001	1.001	-0.001	26.340	21.448	3109.413
70	2.0905	1.669	99.	.18	70.32	1.002	1.001	-0.001	26.340	21.449	3110.413
71	2.4731	1.974	99.	.18	70.30	1.001	1.002	-0.039	26.335	21.459	4459.634
72	2.8573	2.281	99.	.19	70.35	1.002	1.000	-0.042	26.338	21.416	5152.437
73	3.2405	2.587	99.	.12	70.40	1.001	1.001	-0.098	26.319	21.372	5843.437
74	3.6235	2.893	99.	.09	70.41	1.001	1.001	-0.016	26.312	21.363	6534.076
75	4.0076	3.199	99.	.16	70.46	1.001	1.001	-0.035	26.331	21.324	7226.698

Table 46.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 23. GRID NO. 2

BOUNDARY LAYER PROPERTIES

LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO $y+=35$
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FREE STREAM VELOCITY	=	99.035	99.035
FREE STREAM TEMPERATURE	=	70.193	
WALL TEMPERATURE	=	95.200	
WALL HEAT FLUX	=	.07713	
FREE STREAM DENSITY	=	.07622	
FREE STREAM KINEMATIC VISCOSITY	=	.0001604	
DENSITY OF FLUID AT WALL	=	.07279	
KINEMATIC VISCOSITY OF FLUID AT WALL	=	.0001741	
WALL/FREE STREAM DENSITY RATIO	=	.95493	
LOCATION REYNOLDS NUMBER (REX)	=	4326174.37	
INPUT VALUE OF VELOCITY DELTA	=	1.62000	
INPUT VALUE OF TEMPERATURE DELTA	=	1.62000	
CALCULATED DELTA	=		1.37953
DELTA 99.5% INPUT	=	.00000	
DISPLACEMENT THICKNESS (DELSTAR)	=	.19050	.19030
MOMENTUM THICKNESS (THETA)	=	.13632	.13674
ENERGY-DISSIPATION THICKNESS	=	.24394	.24432
ENTHALPY THICKNESS	=	.00665	.00667
SHAPE FACTOR 12 (DELSTAR/THETA)	=	1.39740	1.39174
SHAPE FACTOR 32 (ENERGY/THETA)	=	1.78940	1.78677
MOMENTUM THICKNESS REYNOLDS NUMBER	=	7012.60	7033.93
DISPLACEMENT THICKNESS REYNOLDS NUMBER	=	9799.43	9789.39
SKIN FRICTION COEFFICIENT	=	.002737	
FRICITION VELOCITY	=	3.74884	
LAW OF THE WALL CONSTANT (K)	=	.41000	
LAW OF THE WALL CONSTANT (C)	=	5.00000	.48337
WAKE STRENGTH	=		
CLAUSERS 'DELTA' INTEGRAL	=	-4.62878	-4.85118
CLAUSERS 'G' INTEGRAL	=	32.20997	31.75946
DISPLACEMENT THICKNESS - CONSTANT DENSITY	=	.17953	.18364
MOMENTUM THICKNESS - CONSTANT DENSITY	=	.13769	.13813
SHAPE FACTOR 12 - CONSTANT DENSITY	=	1.30386	1.32947

LOCATION -X- 84.10001

Z = CENTERLINE

Table 47.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. 7. POINT 23. GRID NO. 2

REDUCED PROFILE DATA

N	Y INCHES	Y/ DELTA	U FT/SEC	T DEG. F	U/UE	THETA	UTAU	U(+)	T(+)	Y(+)
1	.0086	.006	41.82	85.72	.422	.379	-15.262	11.155	.050	15.489
2	.0102	.007	43.60	85.06	.440	.405	-14.766	11.152	.609	18.361
3	.0108	.008	44.40	84.90	.448	.412	-14.574	11.844	.745	19.437
4	.0116	.008	45.73	84.55	.462	.426	-14.218	12.200	.040	20.873
5	.0129	.009	47.25	83.93	.477	.451	-13.814	12.603	.572	23.206
6	.0144	.010	49.07	83.51	.495	.467	-13.328	13.089	.926	25.899
7	.0161	.012	50.14	83.21	.506	.479	-13.043	13.375	.292	28.950
8	.0170	.012	50.73	83.08	.512	.485	-12.885	13.512	.292	30.565
9	.0187	.014	51.65	82.70	.521	.500	-12.641	13.777	.611	33.616
10	.0206	.015	52.63	82.38	.531	.513	-12.378	14.039	.83	37.385
11	.0233	.017	53.46	82.29	.540	.516	-12.156	14.261	.961	41.872
12	.0244	.018	53.89	82.06	.544	.519	-12.042	14.375	1.153	43.846
13	.0262	.019	54.40	81.74	.549	.538	-11.906	14.512	1.431	47.077
14	.0282	.020	54.92	81.49	.555	.548	-11.767	14.651	1.638	50.666
15	.0298	.022	55.71	81.33	.562	.554	-11.558	14.859	1.772	53.538
16	.0322	.023	56.09	81.14	.566	.566	-11.455	14.962	11.936	57.845
17	.0335	.024	56.72	81.06	.573	.575	-11.017	15.401	12.210	60.179
18	.0397	.029	57.73	80.62	.583	.592	-10.575	15.842	12.579	63.870
19	.0467	.034	59.39	80.39	.600	.612	-10.261	16.157	12.997	67.330
20	.0542	.039	60.57	79.89	.612	.621	-10.051	16.366	13.192	107.381
21	.0596	.043	61.35	79.66	.620	.630	-9.774	16.644	13.377	119.586
22	.0666	.048	62.39	79.44	.630	.638	-9.503	16.914	13.536	132.508
23	.0738	.054	63.41	79.26	.640	.648	-9.362	17.055	13.756	143.097
24	.0797	.058	63.94	79.00	.646	.655	-9.120	17.296	13.910	155.481
25	.0866	.063	64.85	78.82	.655	.664	-8.847	17.570	14.097	169.121
26	.0942	.068	65.87	78.60	.665	.665	-8.687	17.730	14.122	179.172
27	.0998	.072	66.47	78.57	.671	.677	-8.511	17.806	14.374	191.915
28	.1069	.076	66.75	78.27	.674	.682	-8.480	17.937	14.515	203.940
29	.1136	.082	67.24	78.15	.679	.684	-8.317	18.100	14.623	214.708
30	.1196	.087	67.85	78.10	.685	.689	-8.148	18.269	14.769	227.990
31	.1270	.092	68.49	77.98	.692	.696	-7.961	18.427	15.071	240.733
32	.1341	.097	69.06	77.81	.698	.710	-7.604	18.813	15.208	302.473
33	.1512	.110	70.53	77.45	.712	.716	-7.371	19.046	15.569	333.861
34	.1685	.122	71.40	77.29	.721	.733	-7.149	19.269	15.569	366.726
35	.1860	.135	72.23	76.86	.729	.740	-6.885	19.560	15.907	397.057
36	.2043	.148	73.33	76.47	.740	.754	-6.618	19.800	16.040	428.645
37	.2212	.160	74.23	76.35	.750	.755	-6.424	19.994	16.366	459.874
38	.2388	.173	74.95	76.31	.757	.771	-6.123	20.295	16.682	491.103
39	.2562	.186	76.08	75.92	.768	.786	-6.039	20.379	16.782	522.153
40	.2736	.198	76.40	75.55	.771	.790	-5.918	20.600	16.809	554.638
41	.2909	.211	77.22	75.43	.780	.782	-5.653	20.764	17.391	566.889
42	.3090	.224	77.84	75.64	.786	.819	-5.090	21.328	17.593	632.828
43	.3604	.261	79.95	74.72	.807	.827	-4.663	21.754	17.566	738.961
44	.4117	.298	61.55	74.51	.823	.829	-4.200	22.217	17.593	832.828
45	.4646	.326	63.26	74.48	.841	.859	-3.783	22.634	18.229	925.617
46	.5157	.374	64.85	73.73	.857	.867	-3.370	23.047	18.416	1018.766
47	.5676	.411	66.40	73.51	.872	.882	-3.029	23.388	18.732	1112.274
48	.6197	.449	67.68	73.14	.885	.889	-2.694	23.724	18.869	1205.063
49	.6714	.487	68.94	72.98	.898	.909	-2.338	24.079	19.310	1298.391
50	.7234	.524	70.27	72.46	.912	.916	-2.014	24.404	19.444	1391.181
51	.7751	.562	71.49	72.30	.924	.928	-1.772	24.645	19.714	1484.330
52	.8270	.600	72.39	71.98	.933	.935	-1.497	24.921	19.856	1577.119
53	.8787	.637	73.42	71.81	.943	.946	-1.284	25.133	20.082	1670.268
54	.9306	.675	74.22	71.55	.951	.953	-1.077	25.340	20.235	1763.955
55	.9826	.712	75.00	71.37	.959	.955	-9.920	25.497	20.268	1856.565
56	1.0344	.750	75.86	71.33	.965	.967	-7.734	25.683	20.538	1948.458
57	1.0856	.787	76.28	71.01	.972	.967	-5.61	25.857	20.541	2042.683
58	1.1361	.825	76.93	71.01	.979	.977	-4.80	25.938	20.747	2135.832
59	1.1900	.863	77.24	70.76	.982	.977	-4.360	26.057	20.960	22228.980
60	1.2419	.900	77.68	70.51	.986	.987	-2.722	26.145	20.908	2322.847
61	1.2942	.938	78.01	70.58	.990	.985	-1.86	26.229	21.018	2415.457
62	1.3458	.976	78.33	70.45	.993	.990	-1.32	26.285	21.120	2508.067
63	1.3974	1.013	78.54	70.33	.995	.995	-1.07	26.311	21.189	2600.318
64	1.4488	1.050	78.63	70.36	.996	.993	-1.07	26.349	21.134	2693.647
65	1.5008	1.088	78.78	70.31	.997	.995	-0.68	26.380	21.176	2786.616
66	1.5526	1.125	78.89	70.26	.999	.997	-0.28	26.390	21.206	2879.944
67	1.6046	1.163	78.93	70.22	.999	.999	-0.04	26.414	21.203	2974.169
68	1.6571	1.201	79.02	70.23	1.000	1.000	-0.13	26.404	21.237	3067.318
69	1.7090	1.239	78.99	70.19	1.000	1.001	0.01	26.425	21.268	4441.574
70	2.0920	1.516	99.10	70.16	1.000	1.002	-0.02	26.407	21.272	5130.587
71	2.4747	1.794	99.06	70.15	1.000	1.003	-0.03	26.429	21.238	5818.343
72	2.8566	2.072	99.00	70.15	1.000	1.000	0.00	26.424	21.196	6505.561
73	3.2418	2.350	99.06	70.19	1.000	1.000	0.06	26.425	21.220	7195.292
74	3.6247	2.628	99.06	70.24	1.000	1.000	0.08	26.425		
75	4.0090	2.906	99.06	70.21	1.000	1.000	0.08	26.425		

Table 47.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79

RUN NO. . POINT 24. GRID NO. 2

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO $Y+=35$
FREE STREAM VELOCITY	= 99.030	99.030
FREE STREAM TEMPERATURE	= 69.615	
WALL TEMPERATURE	= 93.940	
WALL HEAT FLUX	= .07689	
FREE STREAM DENSITY	= .07631	
FREE STREAM KINEMATIC VISCOSITY	= .0001601	
DENSITY OF FLUID AT WALL	= .07295	
KINEMATIC VISCOSITY OF FLUID AT WALL	= .0001734	
WALL/FREE STREAM DENSITY RATIO	= .95606	
LOCATION REYNOLDS NUMBER (REX)	= 3520047.47	
INPUT VALUE OF VELOCITY DELTA	= 1.37000	
INPUT VALUE OF TEMPERATURE DELTA	= 1.40000	
CALCULATED DELTA	= 1.13831	
DELTA 99.5% INPUT	= .00000	
DISPLACEMENT THICKNESS (DELSTAR)	= .15888	.15897
MOMENTUM THICKNESS (THETA)	= .11329	.11350
ENERGY-DISSIPATION THICKNESS	= .20224	.20236
ENTHALPY THICKNESS	= .00540	.00541
SHAPE FACTOR 12 (DELSTAR/THETA)	= 1.40241	1.40060
SHAPE FACTOR 32 (ENERGY/THETA)	= 1.78514	1.78296
MOMENTUM THICKNESS REYNOLDS NUMBER	= 5838.69	5849.46
DISPLACEMENT THICKNESS REYNOLDS NUMBER	= 8188.25	8192.76
SKIN FRICTION COEFFICIENT	= .002839	
FRICTION VELOCITY	= 3.81592	
LAW OF THE WALL CONSTANT (K)	= .41000	
LAW OF THE WALL CONSTANT (C)	= 5.00000	
WAKE STRENGTH	= .47315	
CLAUSERS 'DELTA' INTEGRAL	= -3.81864	-3.98508
CLAUSERS 'G' INTEGRAL	= 26.30336	26.21169
DISPLACEMENT THICKNESS - CONSTANT DENSITY	= .15031	.15356
MOMENTUM THICKNESS - CONSTANT DENSITY	= .11442	.11464
SHAPE FACTOR 12 - CONSTANT DENSITY	= 1.31367	1.33949

LOCATION -X- 68.30000

Table 48.

JOB KLD72 TAPE 3166R- FILES 93-116, RUNS 7.01-7.24 04/03/79
 RUN NO. 7. POINT 24. GRID NO. 2

REDUCED PROFILE DATA

N	Y INCHES	Y/	U	T	U/UE	THETA	UTAU	U(+)	T(+)	T(-)	Y(+)
0063	.0077	.007	.006	.37.29	.85.93	.377	.329	-.16.179	.9.773	.6.958	11.611
0086	.0106	.007	.007	.40.51	.84.99	.409	.368	-.15.335	.10.616	.7.779	14.179
0136	.0121	.008	.008	.42.77	.84.32	.432	.396	-.14.742	.11.210	.8.360	15.829
0145	.0168	.009	.009	.44.98	.83.65	.454	.423	-.14.164	.11.788	.8.942	17.847
0185	.0222	.011	.012	.46.54	.83.40	.470	.433	-.13.755	.12.197	.9.162	19.498
0227	.0245	.012	.013	.48.39	.82.88	.489	.475	-.12.872	.13.081	.10.035	22.249
0295	.027	.013	.015	.49.92	.82.39	.504	.482	-.12.651	.13.301	.10.192	25.000
0311	.026	.016	.016	.50.76	.82.21	.513	.498	-.12.362	.13.650	.10.534	26.651
0373	.027	.016	.016	.52.09	.81.82	.526	.518	-.12.081	.13.870	.10.910	30.870
0443	.020	.016	.016	.54.06	.81.02	.534	.538	-.11.785	.14.167	.11.224	38.207
0513	.021	.016	.016	.55.19	.80.80	.550	.540	-.11.490	.14.263	.11.362	40.775
0673	.023	.016	.016	.56.76	.80.49	.557	.553	-.11.339	.14.462	.11.420	43.893
0645	.024	.016	.016	.56.19	.80.20	.563	.565	-.11.225	.14.613	.11.687	47.561
0713	.026	.016	.016	.56.60	.80.01	.572	.573	-.11.119	.14.833	.12.108	50.863
0776	.027	.017	.017	.57.13	.79.90	.577	.577	-.10.979	.14.973	.12.201	54.165
0847	.027	.033	.033	.58.58	.79.58	.591	.590	-.10.602	.15.350	.12.460	57.099
0915	.028	.039	.039	.59.86	.79.06	.605	.612	-.10.264	.15.686	.12.932	68.472
0975	.045	.045	.045	.61.34	.78.64	.619	.629	-.9.878	.16.074	.13.295	81.311
1046	.050	.050	.050	.62.45	.78.58	.631	.631	-.9.567	.16.365	.13.146	94.151
1115	.057	.063	.063	.63.64	.78.35	.643	.641	-.9.273	.16.678	.13.550	105.156
1177	.063	.063	.063	.64.37	.78.07	.650	.652	-.9.064	.16.868	.13.788	118.363
1243	.068	.068	.068	.65.23	.77.97	.659	.656	-.8.857	.17.095	.13.875	142.391
1315	.074	.066	.066	.66.07	.77.87	.667	.661	-.8.637	.17.314	.13.963	155.414
1483	.080	.068	.068	.67.56	.77.56	.675	.673	-.8.446	.17.505	.14.233	167.887
1661	.086	.067	.067	.67.29	.77.46	.679	.678	-.8.319	.17.633	.14.324	178.892
1833	.092	.068	.068	.68.15	.77.39	.688	.680	-.8.093	.17.858	.14.378	191.915
2017	.098	.068	.068	.68.54	.77.08	.692	.693	-.7.990	.17.962	.14.654	204.571
2185	.103	.069	.069	.69.25	.76.89	.699	.701	-.7.804	.18.148	.14.822	215.943
2365	.109	.069	.069	.69.80	.76.76	.705	.706	-.7.660	.18.292	.14.929	228.049
2533	.116	.070	.070	.70.41	.76.62	.711	.712	-.7.501	.18.451	.15.051	241.256
2715	.130	.071	.071	.71.47	.76.36	.722	.723	-.7.223	.18.728	.15.279	272.071
2886	.146	.072	.072	.72.55	.76.00	.733	.738	-.6.939	.19.012	.15.589	294.720
3063	.161	.073	.073	.73.86	.75.83	.746	.745	-.6.596	.19.356	.15.739	316.269
3234	.177	.073	.073	.74.94	.75.56	.757	.756	-.6.314	.19.638	.15.974	347.018
3367	.192	.073	.073	.75.54	.75.24	.763	.769	-.6.156	.19.796	.16.251	400.833
3537	.208	.073	.073	.76.59	.74.93	.773	.782	-.5.879	.20.072	.16.518	433.849
3739	.223	.073	.073	.77.27	.74.82	.780	.786	-.5.701	.20.538	.16.614	464.664
4040	.239	.078	.078	.78.37	.74.52	.791	.798	-.5.414	.20.766	.16.870	498.047
4141	.254	.079	.079	.79.24	.74.56	.800	.797	-.5.186	.20.964	.17.072	529.413
4242	.3063	.080	.080	.79.29	.74.29	.808	.808	-.4.987	.21.394	.17.568	561.878
4343	.311	.081	.081	.64.64	.73.72	.824	.831	-.4.558	.21.942	.17.854	649.921
4444	.354	.083	.083	.73.73	.73.39	.845	.845	-.4.010	.22.391	.18.140	827.108
4545	.396	.085	.085	.44.44	.73.06	.863	.858	-.3.561	.22.790	.18.530	914.600
4646	.438	.086	.086	.66.96	.72.61	.878	.877	-.3.162	.23.217	.18.740	1090.459
4747	.480	.088	.088	.59.59	.72.37	.895	.887	-.2.735	.23.635	.19.115	1090.686
4848	.522	.090	.090	.19.19	.71.94	.911	.904	-.2.317	.24.005	.19.321	1178.912
4949	.565	.106	.106	.61.60	.71.70	.925	.914	-.1.947	.24.085	.19.672	1266.568
5050	.607	.92.68	.92.68	.71.30	.93.36	.931	.931	-.1.665	.24.287	.19.898	1354.631
5152	.649	.93.73	.93.73	.71.04	.94.6	.941	.941	-.1.390	.24.562	.19.898	1354.631
5252	.691	.94.82	.94.82	.70.87	.95.57	.949	.949	-.1.103	.24.849	.20.051	1442.674
5353	.733	.95.45	.95.45	.70.61	.96.4	.959	.959	-.9.37	.25.015	.20.268	1530.533
5454	.775	.96.25	.96.25	.70.52	.97.2	.963	.963	-.7.729	.25.222	.20.378	1618.759
5555	.817	.96.76	.96.76	.70.25	.97.7	.974	.974	-.5.89	.25.363	.20.589	1706.802
5656	.866	.97.38	.97.38	.70.18	.98.3	.977	.977	-.4.4	.25.520	.20.641	1794.662
5757	.902	.97.68	.97.68	.70.01	.98.6	.984	.984	-.3.55	.25.597	.20.794	1882.888
5858	.944	.98.11	.98.11	.69.94	.99.1	.987	.987	-.2.42	.25.710	.20.858	1971.114
5959	.1.0223	.98.86	.98.86	.69.87	.99.4	.989	.989	-.1.67	.25.785	.20.913	2058.607
6060	.1.1705	.1.028	.1.028	.56.80	.99.5	.992	.992	-.1.23	.25.829	.20.977	2147.016
6161	.1.2165	.1.070	.1.070	.69.81	.99.7	.992	.992	-.0.70	.25.882	.20.969	2235.059
6262	.1.2664	.1.113	.1.113	.69.79	.69.75	.996	.995	-.0.62	.25.889	.21.022	2232.919
6363	.1.3141	.1.154	.1.154	.69.72	.69.67	.1.000	.996	-.0.10	.25.942	.21.047	2241.411
6464	.1.3625	.1.197	.1.197	.69.61	.69.67	.1.000	.998	-.0.05	.25.947	.21.092	2249.188
6565	.1.4105	.1.239	.1.239	.69.63	.69.63	.1.000	.999	-.0.04	.25.948	.21.123	2258.231
6666	.1.4582	.1.281	.1.281	.69.62	.69.62	.1.000	.1.000	-.0.02	.25.954	.21.133	2267.723
6767	.1.5068	.1.324	.1.324	.69.60	.69.60	.1.000	.1.001	-.0.02	.25.954	.21.153	2276.867
6868	.1.8635	.1.637	.1.637	.69.56	.69.56	.1.000	.1.000	-.0.01	.25.963	.21.180	23418.135
6969	.2.2203	.1.951	.1.951	.69.10	.69.64	.1.001	.1.000	-.0.01	.25.971	.21.193	40728.323
7070	.2.5778	.2.265	.2.265	.69.61	.69.61	.1.000	.1.000	-.0.04	.25.956	.21.142	53862.591
7171	.2.9345	.2.578	.2.578	.69.61	.69.61	.1.000	.1.000	-.0.01	.25.967	.21.176	6037.043
7272	.3.2913	.2.891	.2.891	.69.57	.69.57	.1.001	.1.002	-.0.01	.25.967	.21.176	6693.512
7373	.3.6492	.3.206	.3.206	.69.59	.69.59	.1.001	.1.001	-.0.01	.25.969	.21.156	7348.881
7474	.4.0065	.3.520	.3.520	.69.61	.69.61	.1.000	.1.000	-.0.06	.25.958	.21.142	

Table 48.

JOB KLD86 TAPE 3166R- FILES 160-169, RUNS 10.01-10.10 04/12/79

RUN NO. 10. POINT 1. GRID NO. 3

BOUNDARY LAYER PROPERTIES

		LINEAR INTERPOLATION TO WALL	SUBLAYER FUNCTION FROM WALL TO $Y^+=35$	STANDARD
FREE STREAM VELOCITY	=	99.114		99.114
FREE STREAM TEMPERATURE	=	68.471		
WALL TEMPERATURE	=	84.850		
WALL HEAT FLUX	=	.07843		
FREE STREAM DENSITY	=	.07652		
FREE STREAM KINEMATIC VISCOSITY	=	.0001594		
DENSITY OF FLUID AT WALL	=	.07422		
KINEMATIC VISCOSITY OF FLUID AT WALL	=	.0001683		
WALL/FREE STREAM DENSITY RATIO	=	.96992		
LOCATION REYNOLDS NUMBER (REX)	=	621769.25		
INPUT VALUE OF VELOCITY DELTA	=	.41000		
INPUT VALUE OF TEMPERATURE DELTA	=	.43000		
CALCULATED DELTA	=			.30842
DELTA 99.5% INPUT	=	.00000		
DISPLACEMENT THICKNESS (DELSTAR)	=	.03839		.03850
MOMENTUM THICKNESS (THETA)	=	.02723		.02744
ENERGY-DISSIPIATION THICKNESS	=	.04908		.04925
ENTHALPY THICKNESS	=	.00089		.00089
SHAPE FACTOR 12 (DELSTAR/THETA)	=	1.40996		1.40289
SHAPE FACTOR 32 (ENERGY/THETA)	=	1.80242		1.79471
MOMENTUM THICKNESS REYNOLDS NUMBER	=	1410.95		1421.84
DISPLACEMENT THICKNESS REYNOLDS NUMBER	=	1989.39		1994.68
SKIN FRICTION COEFFICIENT	=	.004289		
FRICTION VELOCITY	=	4.66028		
LAW OF THE WALL CONSTANT (K)	=	.41000		
LAW OF THE WALL CONSTANT (C)	=	5.00000		
WAKE STRENGTH	=			.05097
CLAUSERS 'DELTA' INTEGRAL	=	-.70358		-.79993
CLAUSEPS 'G' INTEGRAL	=	4.57104		4.51860
DISPLACEMENT THICKNESS - CONSTANT DENSITY	=	.03530		.03761
MOMENTUM THICKNESS - CONSTANT DENSITY	=	.02741		.02762
SHAPE FACTOR 12 - CONSTANT DENSITY	=	1.28792		1.36166

LOCATION -X- 12.00000

Z = CENTERLINE

Table 49.

JOB KLD86 TAPE 3166R- FILES 160-169, RUNS 10.01-10.10 04/12/79

RUN NO. 10. POINT 1. GRID NO. 3

REDUCED PROFILE DATA

N	Y INCHES	Y/ INCHES	U FT/SEC	T DEG.F	U/UE	THETA	UTAU	U(+)	T(+)	Y(+)
1	.0044	.014	41.22	78.86	.416	.366	-12.422	8.845	6.337	10.225
2	.0061	.020	51.54	77.70	.520	.437	-10.208	11.059	7.572	14.148
3	.0074	.024	53.60	76.92	.541	.484	-9.767	11.501	8.395	17.149
4	.0084	.027	56.11	76.34	.566	.519	-9.229	12.039	9.005	19.457
5	.0104	.034	60.07	75.56	.606	.562	-8.378	12.889	9.748	24.073
6	.0124	.040	62.80	75.36	.634	.580	-7.792	13.476	10.050	28.689
7	.0145	.047	64.56	74.86	.651	.610	-7.415	13.853	10.573	33.536
8	.0162	.053	65.99	74.62	.666	.624	-7.107	14.361	10.826	37.460
9	.0174	.057	66.45	74.50	.670	.632	-7.009	14.259	10.950	40.229
10	.0195	.063	67.27	74.20	.679	.650	-6.833	14.035	11.276	45.076
11	.0215	.070	68.47	73.98	.691	.664	-6.575	14.693	11.503	49.692
12	.0235	.076	69.17	73.87	.698	.670	-6.425	14.843	11.620	54.308
13	.0251	.081	69.55	73.74	.702	.678	-6.344	14.924	11.762	58.001
14	.0316	.103	71.73	73.18	.724	.713	-5.875	15.392	12.357	73.004
15	.0365	.125	73.68	72.79	.743	.736	-5.458	15.809	12.766	88.929
16	.0454	.147	75.71	72.42	.764	.759	-5.023	16.245	13.160	104.655
17	.0514	.167	77.07	72.24	.778	.770	-4.730	16.538	13.344	118.703
18	.0585	.190	78.56	71.98	.793	.785	-4.411	16.657	13.617	135.090
19	.0655	.212	79.91	71.70	.806	.803	-4.120	17.147	13.913	151.247
20	.0716	.232	81.07	71.51	.818	.814	-3.872	17.396	14.115	165.326
21	.0785	.255	81.84	71.29	.826	.828	-3.707	17.561	14.355	181.251
22	.0855	.277	83.07	71.03	.838	.844	-3.442	17.626	14.626	197.408
23	.0914	.296	83.92	70.87	.847	.854	-3.260	18.008	14.797	211.025
24	.0984	.319	85.08	70.76	.858	.860	-3.010	18.257	14.915	227.182
25	.1055	.342	85.90	70.60	.867	.870	-2.836	18.432	15.081	243.569
26	.1116	.362	86.72	70.47	.875	.878	-2.660	18.608	15.222	257.648
27	.1185	.384	87.67	70.24	.885	.892	-2.456	18.812	15.462	273.573
28	.1253	.406	88.52	70.16	.893	.896	-2.274	18.994	15.532	289.268
29	.1424	.462	90.44	69.81	.912	.918	-1.862	19.406	15.918	328.736
30	.1602	.520	92.34	69.62	.932	.930	-1.454	19.813	16.118	369.819
31	.1773	.575	93.68	69.38	.945	.945	-1.167	20.101	16.376	409.287
32	.1955	.634	94.56	69.18	.954	.956	-0.977	20.290	16.582	451.293
33	.2124	.689	95.61	69.03	.965	.966	-0.752	20.516	16.743	490.299
34	.2307	.748	96.61	68.94	.975	.971	-0.536	20.731	16.839	532.537
35	.2474	.802	97.00	68.97	.979	.969	-0.454	20.814	16.807	571.061
36	.2655	.861	97.59	68.83	.985	.978	-0.328	20.940	16.957	612.857
37	.2825	.916	98.07	68.70	.989	.986	-0.224	21.044	17.089	652.094
38	.3005	.974	98.36	68.64	.992	.990	-0.161	21.106	17.157	693.639
39	.3302	1.071	98.50	68.61	.994	.992	-0.132	21.136	17.191	762.188
40	.3604	1.169	98.77	68.57	.997	.994	-0.073	21.195	17.232	831.891
41	.3905	1.266	99.28	68.54	1.002	.996	-0.036	21.304	17.268	901.363
42	.4205	1.364	99.24	68.50	1.001	.998	-0.028	21.295	17.309	970.605
43	.4504	1.460	99.97	68.47	1.000	1.000	-0.032	21.236	17.337	1039.616
44	.4806	1.558	99.13	68.47	1.000	1.000	-0.040	21.272	17.338	1109.319
45	.5107	1.656	99.20	68.47	1.001	1.000	-0.018	21.285	17.338	1178.791
46	.5403	1.752	99.20	68.48	1.001	1.000	-0.019	21.287	17.331	1247.110
47	.5703	1.849	99.16	68.47	1.000	1.000	-0.009	21.277	17.302	1316.351
48	.6004	1.947	99.16	68.48	1.001	0.999	-0.013	21.281	17.323	1385.824
49	.8004	2.595	99.12	68.45	1.000	1.001	-0.000	21.268	17.360	1847.434
50	1.0004	3.244	99.18	68.47	1.001	1.000	-0.013	21.281	17.336	2309.044
51	1.2004	3.892	99.30	68.49	1.002	0.999	-0.041	21.309	17.318	2770.655
52	1.4004	4.541	99.24	68.50	1.001	0.998	-0.027	21.295	17.306	3232.265
53	1.6002	5.188	99.00	68.52	0.999	0.997	-0.025	21.243	17.288	3693.414
54	1.8003	5.837	99.05	68.56	0.999	0.995	-0.014	21.254	17.242	4155.255
55	2.0004	6.486	99.12	68.51	1.000	0.998	-0.002	21.270	17.300	4617.096
56	2.2005	7.135	99.16	68.59	1.000	0.993	-0.010	21.278	17.212	5078.937
57	2.4002	7.782	99.22	68.52	1.001	0.997	-0.023	21.291	17.283	5539.855
58	2.6001	8.431	99.06	68.53	1.000	0.996	-0.011	21.257	17.271	6001.235
59	2.8004	9.080	99.03	68.54	1.000	0.996	-0.018	21.250	17.259	6463.538
60	3.0004	9.728	99.26	68.47	1.001	1.000	-0.031	21.299	17.337	6925.148

Table 49.

JOB KLD66 TAPE 3166R- FILES 160-169, RUNS 10.01-10.10 04/12/79

RUN NO. 10. POINT 2. GRID NO. 3

BOUNDARY LAYER PROPERTIES

LINEAR INTERPOLATION	STANDARD SUBLAYER FUNCTION FROM TO WALL
-------------------------	--------------------------------------------------

FREE STREAM VELOCITY =	99.606	99.606
FREE STREAM TEMPERATURE =	68.803	
WALL TEMPERATURE =	85.180	
WALL HEAT FLUX =	.07827	
FREE STREAM DENSITY =	.07647	
FREE STREAM KINEMATIC VISCOSITY =	.0001596	
DENSITY OF FLUID AT WALL =	.67417	
KINEMATIC VISCOSITY OF FLUID AT WALL =	.0001684	
WALL/FREE STREAM DENSITY RATIO =	.96994	
LOCATION REYNOLDS NUMBER (REX) =	624159.74	
INPUT VALUE OF VELOCITY DELTA =	.43000	
INPUT VALUE OF TEMPERATURE DELTA =	.49000	
CALCULATED DELTA =		.32220
DISPLACEMENT THICKNESS (DELSTAR) =	.00000	
MOMENTUM THICKNESS (THETA) =	.04005	.04002
ENERGY-DISSIPATION THICKNESS =	.02825	.02849
ENTHALPY THICKNESS =	.05086	.05108
SHAPE FACTOR 12 (DELSTAR/THETA) =	.00092	.00093
SHAPE FACTOR 32 (ENERGY/THETA) =	1.41783	1.40464
MOMENTUM THICKNESS REYNOLDS NUMBER =	1.80038	1.79271
DISPLACEMENT THICKNESS REYNOLDS NUMBER =	1469.41	1482.03
SKIN FRICTION COEFFICIENT =	2083.38	2081.71
FRICTION VELOCITY =	.004243	
LAW OF THE WALL CONSTANT (K) =	4.65864	
LAW OF THE WALL CONSTANT (C) =	.41000	
WAKE STRENGTH =	5.00000	.05301
CLAUSERS 'DELTA' INTEGRAL =	-.73139	-.83601
CLAUSEPS 'G' INTEGRAL =	4.89388	4.76306
DISPLACEMENT THICKNESS - CONSTANT DENSITY =	.03667	.03910
MOMENTUM THICKNESS - CONSTANT DENSITY =	.02843	.02868
SHAPE FACTOR 12 - CONSTANT DENSITY =	1.28983	1.36327

LOCATION -X- 12.00000

Z = +6 INCHES

Table 50.

JOB KLD86 TAPE 3166R- FILES 160-169, RUNS 10.01-10.10 04/12/79

RUN NO. 10. POINT 2. GRID NO. 3

REDUCED PROFILE DATA

N	Y INCHES	Y/ FT/SEC	U DEG.F	T U/UE	THETA	UTAU	U(+)	T(+)	Y(+)
1	.0049	.43.88	78.69	.441	.396	-11.962	9.419	6.875	11.363
2	.0067	.52.09	77.97	.523	.440	-10.199	11.182	7.639	15.511
3	.0079	.025	53.96	.77.38	.562	.476	-9.798	11.583	8.267
4	.0089	.028	56.11	76.91	.563	.505	-9.336	12.045	18.277
5	.0109	.034	60.10	76.22	.603	.547	-8.481	12.900	20.562
6	.0129	.040	62.32	75.75	.626	.576	-8.004	13.377	25.191
7	.0149	.046	64.00	75.16	.643	.612	-7.644	14.079	29.801
8	.0166	.052	65.59	74.99	.658	.622	-7.302	10.798	34.410
9	.0178	.055	66.01	74.87	.663	.629	-7.213	10.920	38.328
10	.0199	.062	67.10	74.57	.674	.648	-6.977	14.404	41.094
11	.0220	.068	67.91	74.36	.682	.661	-6.804	14.577	45.934
12	.0240	.075	68.72	74.21	.690	.670	-6.629	14.752	50.774
13	.0256	.080	69.49	74.08	.698	.678	-6.465	14.916	55.384
14	.0270	.099	71.18	73.54	.715	.711	-6.101	15.280	59.071
15	.0391	.121	73.29	73.12	.736	.737	-5.648	15.733	73.822
16	.046C	.143	75.02	72.81	.753	.756	-5.278	16.103	90.186
17	.0519	.161	76.86	72.56	.772	.771	-4.882	16.499	106.089
18	.0589	.183	78.04	72.26	.783	.789	-4.630	16.751	119.687
19	.0659	.205	79.63	72.00	.799	.805	-4.289	17.092	135.820
20	.0719	.223	80.69	71.90	.810	.811	-4.061	17.320	151.954
21	.0792	.246	81.81	71.64	.821	.827	-3.819	17.562	165.782
22	.0861	.267	83.24	71.49	.836	.836	-3.513	17.866	182.607
23	.0919	.285	84.21	71.30	.845	.848	-3.304	18.077	198.510
24	.0988	.307	85.02	71.11	.854	.859	-3.131	18.250	211.878
25	.1058	.326	85.81	70.93	.862	.870	-2.961	18.420	227.780
26	.1120	.346	86.68	70.76	.870	.881	-2.775	18.606	243.914
27	.1189	.369	88.18	70.67	.885	.886	-2.454	18.927	258.203
28	.1261	.391	88.61	70.67	.890	.886	-2.360	19.021	274.106
29	.1429	.444	90.72	70.25	.911	.912	-1.907	19.474	329.421
30	.1606	.499	92.46	70.02	.928	.926	-1.530	19.851	370.215
31	.1779	.552	93.47	69.81	.938	.939	-1.316	20.065	410.068
32	.1960	.608	94.61	69.61	.950	.951	-1.072	20.309	451.804
33	.2129	.661	95.61	69.54	.960	.955	-857	20.524	490.755
34	.2311	.717	96.75	69.32	.971	.968	-613	20.768	532.702
35	.2480	.770	97.31	69.26	.977	.972	-492	20.889	571.652
36	.2661	.826	97.85	69.15	.982	.979	-378	21.003	613.369
37	.2832	.879	98.22	69.15	.986	.979	-297	21.084	652.780
38	.3009	.934	98.62	69.06	.990	.984	-211	21.170	693.575
39	.3307	1.026	99.22	68.94	.996	.992	-863	21.198	762.257
40	.3610	1.121	99.51	68.92	.999	.993	-2021	21.360	822.091
41	.3909	1.213	99.26	68.89	.997	.995	-74	21.307	901.004
42	.4208	1.306	99.40	68.89	.998	.995	-045	21.336	969.917
43	.4509	1.400	99.57	68.85	1.000	.997	-007	21.374	1039.290
44	.4811	1.493	99.63	68.81	1.000	.997	-005	21.366	1108.894
45	.5110	1.586	99.62	68.80	1.000	1.000	-002	21.383	1177.807
46	.5410	1.679	99.70	68.80	1.001	1.000	-020	21.401	1246.950
47	.5709	1.772	99.50	68.81	1.000	1.000	-022	21.359	1315.863
48	.6009	1.865	99.73	68.78	1.000	1.001	-026	21.407	1385.006
49	.8C09	2.086	99.61	68.78	1.000	1.001	-000	21.381	17.378
50	1.0009	3.107	99.56	68.74	1.000	1.004	-005	21.376	1845.960
51	1.2009	3.727	99.55	68.69	.999	1.007	-013	21.368	17.472
52	1.4009	4.348	99.58	68.76	1.000	1.003	-006	21.375	3228.822
53	1.6006	4.968	99.72	68.69	1.001	1.007	-025	21.406	3689.085
54	1.8010	5.590	99.61	68.73	1.000	1.005	-002	21.383	4150.961
55	2.0010	6.210	99.75	68.72	1.001	1.005	-030	21.411	4611.915
56	2.2009	6.631	99.46	68.73	.999	1.005	-031	21.350	5072.639
57	2.4007	7.451	99.56	68.75	1.000	1.004	-009	21.372	5533.132
58	2.6006	8.071	99.35	68.75	.997	1.003	-054	21.327	5993.856
59	2.8010	8.693	99.39	68.76	.998	1.003	-046	21.335	6455.732
60	3.0010	9.314	99.39	68.77	.998	1.002	-046	21.335	6916.686

Table 50.

JOB KLD86 TAPE 3166R~ FILES 160-169, RUNS 10.01-10.10 04/12/79

RUN NO. 10. POINT 3. GRID NO. 3

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	SUBLAYER FUNCTION FROM WALL TO Y+ = 35	STANDARD
FREE STREAM VELOCITY =	99.576	99.576	
FREE STREAM TEMPERATURE =	69.320		
WALL TEMPERATURE =	85.670		
WALL HEAT FLUX =	.07945		
FREE STREAM DENSITY =	.07640		
FREE STREAM KINEMATIC VISCOSITY =	.0001599		
DENSITY OF FLUID AT WALL =	.07411		
KINEMATIC VISCOSITY OF FLUID AT WALL =	.0001687		
WALL/FREE STREAM DENSITY RATIO =	.97002		
LOCATION REYNOLDS NUMBER (REX) =	622893.96		
INPUT VALUE OF VELOCITY DELTA =	.43000		
INPUT VALUE OF TEMPERATURE DELTA =	.46000		
CALCULATED DELTA =			.30385
DELTA 99.5% INPUT =	.00000		
DISPLACEMENT THICKNESS (DELSTAR) =	.03919		.03913
MOMENTUM THICKNESS (THETA) =	.02744		.02785
ENERGY-DISSIPATION THICKNESS =	.04954		.04994
ENTHALPY THICKNESS =	.00086		.00086
SHAPE FACTOR 12 (DELSTAR/THETA) =	1.42855		1.40498
SHAPE FACTOR 32 (ENERGY/THETA) =	1.80550		1.79303
MOMENTUM THICKNESS REYNOLDS NUMBER =	1424.16		1445.81
DISPLACEMENT THICKNESS REYNOLDS NUMBER =	2034.49		2031.34
SKIN FRICTION COEFFICIENT =	.004227		
FRICTION VELOCITY =	4.64792		
LAW OF THE WALL CONSTANT (K) =	.41000		
LAW OF THE WALL CONSTANT (C) =	5.00000		.09308
WAKE STRENGTH =			
CLAUSERS 'DELTA' INTEGRAL =	-.68576		-.81993
CLAUSERS 'G' INTEGRAL =	4.92636		4.69910
DISPLACEMENT THICKNESS - CONSTANT DENSITY =	.03517		.03827
MOMENTUM THICKNESS - CONSTANT DENSITY =	.02761		.02803
SHAPE FACTOR 12 - CONSTANT DENSITY =	1.27415		1.36521
LOCATION -X- =	12.00000		
Z = -6 INCHES			

Table 51.

JOB KLD86 TAPE 3166R- FILES 160-169, RUNS 10.01-10.10 04/12/79

RUN NO. 10. POINT 3. GRID NO. 3

REDUCED PROFILE DATA

N	Y INCHES	Y/ FT	U FT/SEC	T DEG.F	U/UE	THETA	U-UE	UTAU	U (+)	T (+)	Y (+)
1	.0063	.021	.50 .99	78 .12	.512	.462	-10 .454	10 .969	7 .853	14 .533	
2	.0073	.024	.52 .86	77 .66	.531	.490	-10 .050	11 .374	8 .336	16 .828	
3	.0063	.027	.55 .72	77 .20	.560	.518	-9 .437	11 .987	8 .818	19 .124	
4	.0093	.031	.58 .25	76 .82	.585	.541	-8 .892	12 .532	9 .206	21 .420	
5	.0103	.034	.59 .95	76 .54	.602	.558	-8 .525	12 .899	9 .500	23 .716	
6	.0121	.040	.62 .58	76 .16	.628	.582	-7 .961	13 .463	9 .894	27 .848	
7	.0137	.045	.63 .76	75 .92	.640	.596	-7 .705	13 .719	10 .145	31 .522	
8	.0143	.047	.64 .20	75 .83	.645	.602	-7 .610	13 .813	10 .237	32 .899	
9	.0163	.054	.65 .59	75 .45	.659	.625	-7 .311	14 .113	10 .632	37 .491	
10	.0183	.060	.66 .55	75 .15	.668	.643	-7 .106	14 .317	10 .945	42 .082	
11	.0206	.068	.67 .70	75 .03	.680	.651	-6 .858	14 .566	11 .072	47 .363	
12	.0222	.073	.68 .48	74 .89	.688	.660	-6 .690	14 .734	11 .221	51 .036	
13	.0236	.078	.68 .94	74 .73	.692	.669	-6 .591	14 .833	11 .380	54 .250	
14	.0256	.084	.69 .72	74 .56	.700	.679	-6 .423	15 .001	11 .556	58 .842	
15	.0276	.091	.70 .23	74 .43	.705	.688	-6 .315	15 .109	11 .699	63 .433	
16	.0296	.098	.70 .80	74 .31	.711	.695	-6 .191	15 .233	11 .822	68 .025	
17	.0312	.103	.71 .41	74 .20	.717	.702	-6 .060	15 .364	11 .936	71 .698	
18	.0373	.123	.73 .16	73 .78	.735	.727	-5 .684	15 .740	12 .368	85 .703	
19	.0443	.146	.74 .84	73 .36	.752	.753	-5 .322	16 .102	12 .813	101 .774	
20	.0513	.169	.76 .93	73 .06	.773	.772	-4 .868	16 .556	13 .125	117 .844	
21	.0573	.189	.78 .13	72 .81	.785	.787	-4 .614	16 .810	13 .383	131 .619	
22	.0647	.213	.79 .56	72 .55	.799	.802	-4 .306	17 .117	13 .647	148 .608	
23	.0715	.235	.80 .96	72 .31	.613	.817	-4 .006	17 .418	13 .900	164 .220	
24	.0775	.255	.82 .22	72 .16	.826	.827	-3 .735	17 .689	14 .061	177 .995	
25	.0843	.278	.83 .33	71 .96	.837	.839	-3 .496	17 .928	14 .266	193 .606	
26	.0913	.301	.84 .19	71 .72	.845	.853	-3 .311	18 .112	14 .518	209 .677	
27	.0976	.321	.85 .13	71 .56	.855	.863	-3 .109	18 .315	14 .685	224 .141	
28	.1046	.344	.86 .14	71 .38	.865	.874	-2 .891	18 .533	14 .870	240 .211	
29	.1116	.367	.87 .06	71 .18	.874	.886	-2 .692	18 .732	15 .072	256 .282	
30	.1175	.387	.88 .10	71 .00	.885	.897	-2 .469	18 .955	15 .265	269 .827	
31	.1247	.410	.88 .81	70 .94	.892	.901	-2 .316	19 .108	15 .327	286 .357	
32	.1316	.433	.89 .64	70 .86	.900	.906	-2 .138	19 .286	15 .412	302 .198	
33	.1485	.489	.91 .36	70 .61	.918	.921	-1 .767	19 .657	15 .667	340 .998	
34	.1662	.547	.92 .89	70 .32	.933	.939	-1 .439	19 .985	15 .977	381 .634	
35	.1835	.604	.94 .49	70 .30	.949	.952	-1 .095	20 .329	16 .203	421 .351	
36	.2016	.664	.95 .55	69 .94	.960	.962	-8 .666	20 .558	16 .362	462 .906	
37	.2185	.719	.96 .44	69 .78	.968	.972	-6 .75	20 .748	16 .530	501 .705	
38	.2366	.779	.97 .21	69 .74	.976	.974	-5 .10	20 .914	16 .570	543 .259	
39	.2533	.834	.97 .68	69 .69	.981	.978	-4 .09	21 .015	16 .630	581 .599	
40	.2716	.894	.98 .05	69 .56	.985	.985	-3 .28	21 .096	16 .758	623 .613	
41	.2883	.949	.98 .52	69 .56	.989	.985	-2 .27	21 .196	16 .764	661 .953	
42	.3065	1.009	.98 .81	69 .50	.992	.989	-1 .65	21 .259	16 .822	703 .737	
43	.3362	1.107	.99 .12	69 .42	.995	.994	-1 .098	21 .326	16 .912	71 .923	
44	.3668	1.207	.99 .18	69 .38	.996	.996	-0 .885	21 .339	16 .952	842 .175	
45	.3966	1.305	.99 .37	69 .40	.998	.995	-0 .45	21 .378	16 .929	910 .590	
46	.4266	1.404	.99 .44	69 .35	.999	.998	-0 .29	21 .395	16 .985	979 .466	
47	.4567	1.503	.99 .50	69 .30	.999	.998	-0 .16	21 .408	16 .982	1048 .569	
48	.4863	1.601	.99 .59	69 .35	1.000	.998	-0 .02	21 .426	16 .980	1116 .525	
49	.5165	1.700	.99 .64	69 .31	1.001	1.001	-0 .14	21 .438	17 .021	1185 .859	
50	.5466	1.799	.99 .47	69 .30	1.000	1.001	-0 .23	21 .400	17 .036	1254 .963	
51	.5766	1.898	.99 .59	69 .32	1.000	1.000	-0 .02	21 .426	17 .013	1323 .837	
52	.6063	1.995	.99 .50	69 .28	1.000	1.002	-0 .16	21 .408	17 .050	1392 .023	
53	.8063	2.654	.99 .47	69 .32	1.000	-0 .024	21 .400	17 .008	1851 .187		
54	1.0063	3.312	.99 .44	69 .33	1.000	.999	-0 .029	21 .395	16 .997	2310 .350	
55	1.2063	3.970	.99 .65	69 .35	1.001	.998	-0 .016	21 .400	16 .985	2769 .514	
56	1.4063	4.628	.99 .02	69 .36	1.000	.998	-0 .120	21 .304	16 .975	3228 .677	
57	1.6061	5.286	.99 .09	69 .32	1.000	-0 .104	21 .320	17 .014	3687 .382		
58	1.8063	5.945	.99 .32	69 .36	1.000	.998	-0 .056	21 .368	16 .975	4147 .DD4	
59	2.0066	6.604	.99 .30	69 .32	1.000	.997	-0 .060	21 .363	17 .009	4606 .857	
60	2.2063	7.261	.99 .53	69 .34	1.000	.999	-0 .009	21 .410	16 .991	5065 .331	
61	2.4062	7.919	.99 .46	69 .36	1.000	.998	-0 .024	21 .400	16 .972	5524 .265	
62	2.6061	8.577	.99 .24	69 .39	1.000	.997	-0 .073	21 .351	16 .939	5983 .199	
63	2.8063	9.236	.99 .32	69 .37	1.000	.997	-0 .055	21 .369	16 .963	6442 .822	
64	3.0063	9.894	.99 .35	69 .35	1.000	.998	-0 .049	21 .375	16 .980	6901 .986	

Table 51.

JOB KLD70 TAPE 3166R- FILES 69-92, RUNS 6.01-6.24 03/27/79

RUN NO. 6. POINT 7. GRID NO. 3

BOUNDARY LAYER PROPERTIES

LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO $Y+ = 35$
------------------------------------	------------------------------------------------------------

FREE STREAM VELOCITY	=	99.379	99.379
FREE STREAM TEMPERATURE	=	71.677	
WALL TEMPERATURE	=	91.600	
WALL HEAT FLUX	=	.07783	
FREE STREAM DENSITY	=	.07569	
FREE STREAM KINEMATIC VISCOSITY	=	.0001619	
DENSITY OF FLUID AT WALL	=	.07295	
KINEMATIC VISCOSITY OF FLUID AT WALL	=	.0001728	
WALL/FREE STREAM DENSITY RATIO	=	.96386	
LOCATION REYNOLDS NUMBER (REX)	=	1447419.62	
INPUT VALUE OF VELOCITY DELTA	=	1.30000	
INPUT VALUE OF TEMPERATURE DELTA	=	1.30000	
CALCULATED DELTA			.67210
DISPLACEMENT THICKNESS (DELSTAR)	=	.00000	
MOMENTUM THICKNESS (THETA)	=	.08106	.08093
ENERGY-DISSIPATION THICKNESS	=	.05936	.05979
ENTHALPY THICKNESS	=	.10798	.10839
SHAPE FACTOR 12 (DELSTAR/R/THETA)	=	.00235	.00236
SHAPE FACTOR 32 (ENERGY/THETA)	=	1.36548	1.35360
MOMENTUM THICKNESS REYNOLDS NUMBER	=	1.81897	1.81278
DISPLACEMENT THICKNESS REYNOLDS NUMBER	=	3036.21	3058.03
SKIN FRICTION COEFFICIENT	=	4145.89	4139.36
FRICTION VELOCITY	=	.003559	
LAW OF THE WALL CONSTANT (K)	=	4.27000	
LAW OF THE WALL CONSTANT (C)	=	.41000	
WAKE STRENGTH	=	5.00000	
CLAUSERS 'DELTA' INTEGRAL	=	-1.66128	-1.82861
CLAUSERS 'G' INTEGRAL	=	10.25438	9.93869
DISPLACEMENT THICKNESS - CONSTANT DENSITY	=	.07504	.07857
MOMENTUM THICKNESS - CONSTANT DENSITY	=	.05978	.06022
SHAPE FACTOR 12 - CONSTANT DENSITY	=	1.25538	1.30468

LOCATION -X- 28.30000

Z = CENTERLINE

Table 52.

JOB KLD7C TAPE 3166R- FILES 69-92, RUNS 6.01-6.24 03/27/79

RUN NO. 6. POINT 7. GRID NO. 3

REDUCED PROFILE DATA

N	Y INCHES	Y/ DELT A	U/ FT/SEC	T/ DEG.F	U/UE	THETA	U-UE UTAU	U(+)	T(+)	Y(+)
1	.0073	.C11	46.77	83.53	.471	.405	-12.320	10.954	7.747	15.093
2	.0085	.C13	49.46	82.70	.498	.447	-11.691	11.583	8.547	17.564
3	.0093	.C14	51.81	82.31	.521	.466	-11.141	12.133	8.923	19.211
4	.0103	.C15	53.46	81.91	.538	.487	-10.749	12.525	9.312	21.270
5	.0117	.C17	55.09	81.30	.554	.517	-10.372	12.901	9.889	24.153
6	.0132	.C20	57.29	81.00	.576	.532	-9.857	13.417	10.178	27.441
7	.0147	.C22	58.19	80.57	.586	.554	-9.647	13.627	10.594	30.330
8	.0157	.C23	58.80	80.30	.592	.567	-9.503	13.771	10.850	32.389
9	.0175	.C26	60.06	80.08	.604	.578	-9.208	14.066	11.065	36.095
10	.0194	.C29	60.99	79.75	.614	.595	-8.990	14.284	11.385	40.008
11	.0215	.C32	61.79	79.58	.622	.603	-8.803	14.471	11.548	44.332
12	.0231	.C34	62.38	79.36	.628	.614	-8.665	14.609	11.758	47.626
13	.0247	.C37	62.86	79.03	.633	.631	-8.553	14.721	12.078	50.921
14	.0267	.C40	63.62	79.03	.640	.631	-8.375	14.899	12.071	55.039
15	.0286	.C43	64.41	78.81	.648	.642	-8.190	15.084	12.282	58.951
16	.0307	.C46	64.84	78.63	.652	.651	-8.088	15.186	12.454	63.275
17	.0322	.C48	65.17	78.53	.656	.656	-8.012	15.262	12.551	66.364
18	.0367	.C58	66.98	78.07	.674	.679	-7.587	15.687	12.997	79.748
19	.0455	.C68	68.59	77.75	.690	.695	-7.210	16.064	13.308	93.749
20	.0524	.C78	69.91	77.46	.703	.710	-6.902	16.372	13.581	107.957
21	.C565	.C87	71.14	77.36	.716	.715	-6.614	16.660	13.677	120.517
22	.0657	.C96	72.19	77.10	.726	.728	-6.369	16.905	13.926	135.342
23	.0727	.C108	73.25	76.74	.737	.746	-6.119	17.155	14.272	149.756
24	.0787	.C117	74.45	76.61	.749	.752	-5.839	17.435	14.397	162.110
25	.0855	.C127	75.28	76.50	.758	.758	-5.643	17.631	14.508	176.112
26	.0925	.C138	76.26	76.40	.767	.763	-5.415	17.859	14.598	190.525
27	.0963	.C146	76.95	76.15	.774	.776	-5.253	18.021	14.845	202.468
28	.1055	.C157	77.70	75.91	.782	.788	-5.078	18.196	15.072	217.293
29	.1124	.C167	78.53	75.78	.790	.794	-4.883	18.391	15.195	231.501
30	.1186	.C177	79.37	75.76	.799	.795	-4.687	18.587	15.214	244.267
31	.1254	.C187	79.94	75.72	.804	.797	-4.553	18.721	15.258	258.269
32	.1325	.C197	80.82	75.48	.813	.809	-4.347	18.927	15.487	272.888
33	.1496	.C223	82.22	74.99	.827	.834	-4.018	19.256	15.958	308.098
34	.1671	.C249	83.77	74.97	.843	.835	-3.655	19.619	15.973	344.132
35	.1844	.C274	84.89	74.72	.854	.847	-3.392	19.881	16.209	379.753
36	.2026	.C301	86.32	74.37	.869	.865	-3.059	20.215	16.554	417.228
37	.2193	.C326	87.36	74.25	.879	.871	-2.815	20.459	16.662	451.615
38	.2374	.C353	88.22	74.15	.888	.876	-2.614	20.659	16.764	488.884
39	.2543	.C378	89.46	73.96	.890	.885	-2.317	20.957	16.944	523.682
40	.2727	.C406	90.09	73.74	.907	.896	-2.175	21.098	17.151	561.569
41	.2895	.C431	90.36	73.54	.909	.906	-2.112	21.162	17.348	596.161
42	.3074	.C457	91.03	73.45	.916	.911	-1.954	21.319	17.434	633.018
43	.3371	.C502	92.29	73.11	.929	.928	-1.660	21.614	17.759	694.173
44	.3675	.C547	93.40	72.96	.940	.936	-1.401	21.873	17.907	756.768
45	.3977	.C592	94.24	72.75	.948	.946	-1.202	22.071	18.102	818.952
46	.4277	.C636	94.96	72.57	.956	.955	-1.035	22.239	18.283	880.724
47	.4573	.C680	95.35	72.52	.959	.958	-943	22.331	18.326	941.672
48	.4873	.C725	95.84	72.46	.964	.960	-829	22.445	18.381	1003.444
49	.5177	.C770	96.38	72.30	.970	.969	-702	22.572	18.543	1066.040
50	.5475	.C815	96.83	72.23	.974	.972	-604	22.670	18.606	1127.400
51	.5775	.C859	97.20	72.08	.978	.980	-511	22.763	18.747	1189.172
52	.6075	.C904	97.49	72.05	.983	.981	-395	22.879	18.779	1250.944
53	.8073	1.201	98.92	71.84	.995	.992	-107	23.167	18.980	1662.345
54	1.0077	1.899	99.24	71.75	.999	.996	-0.32	23.242	19.070	2074.982
55	1.2076	1.797	99.42	71.70	1.000	.999	.008	23.282	19.112	2486.589
56	1.4074	2.094	99.37	71.69	1.000	.999	-0.03	23.271	19.128	2897.990
57	1.6071	2.391	99.35	71.70	1.000	.999	-0.07	23.267	19.113	3309.186
58	1.8076	2.696	99.42	71.64	1.000	1.002	-0.10	23.284	19.172	3722.028
59	2.0079	2.988	99.36	71.64	1.000	1.002	-0.05	23.269	19.171	4134.459

Table 52.

JOB KLD86 TAPE 3166R- FILES 160-169, RUNS 10.01-10.10 04/12/79

RUN NO. 10. POINT 4. GRID NO. 3

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO Y+=35
FREE STREAM VELOCITY	99.588	99.588
FREE STREAM TEMPERATURE	69.822	
WALL TEMPERATURE	89.070	
WALL HEAT FLUX	.07719	
FREE STREAM DENSITY	.07633	
KINEMATIC VISCOSITY OF FLUID AT WALL	.0001601	
WALL/FREE STREAM DENSITY RATIO	.07365	
LOCATION REYNOLDS NUMBER (REX)	.0001706	
INPUT VALUE OF VELOCITY DELTA	.96492	
INPUT VALUE OF TEMPERATURE DELTA	1461518.06	
CALCULATED DELTA	1.10000	
DISPLACEMENT THICKNESS (DELSTAR)	1.30000	
MOMENTUM THICKNESS (THETA)	.67762	
ENERGY-DISSIPATION THICKNESS	.00000	
SHAPE FACTOR 12 (DELSTAR/THETA)	.08466	
SHAPE FACTOR 32 (ENERGY/THETA)	.06199	
MOMENTUM THICKNESS REYNOLDS NUMBER	.06223	
DISPLACEMENT THICKNESS REYNOLDS NUMBER	.11212	
SKIN FRICTION COEFFICIENT	.11234	
FRICITION VELOCITY	.00215	
LAW OF THE WALL CONSTANT (K)	.00216	
LAW OF THE WALL CONSTANT (C)	1.35935	
WAKE STRENGTH	1.80509	
CLAUSERS 'DELTA' INTEGRAL	3225.35	
DISPLACEMENT THICKNESS - CONSTANT DENSITY	4384.37	
MOMENTUM THICKNESS - CONSTANT DENSITY	.003470	
SHAPE FACTOR 12 - CONSTANT DENSITY	.422296	
	.41000	
	5.00000	
	.18803	
CLAUSERS 'G' INTEGRAL	-1.94426	
DISPLACEMENT THICKNESS - CONSTANT DENSITY	11.00548	
MOMENTUM THICKNESS - CONSTANT DENSITY	.08244	
SHAPE FACTOR 12 - CONSTANT DENSITY	.06266	
	.06241	
	1.27857	
	.31584	

LOCATION -X- 28.20000

Z = +6 INCHES

Table 53.

JOB KLD86 TAPE 3166R- FILES 160-169, RUNS 10.01-10.10 04/12/79

RUN NO. 10. POINT 4. GRID NO. 3

REDUCED PROFILE DATA

N	Y/ INCHES	Y/ FT/SEC	U DEG.F	T U/UE	THETA UTAU	U-UE U(+)	T(+) T(+)	Y(+) Y(+)
1	.0054	.008	37.48	82.07	.376	.364 -14.708	8.874	6.768 11.203
2	.0071	.011	45.22	81.13	.454	.413 -12.874	10.709	7.682 14.710
3	.0083	.012	48.06	80.52	.483	.446 -12.202	11.381	8.265 17.186
4	.0094	.014	50.76	80.04	.510	.469 -11.562	12.021	8.735 19.455
5	.0117	.017	54.38	79.06	.546	.520 -10.706	12.876	9.684 24.201
6	.0137	.020	56.62	78.58	.569	.546 -9.881	13.408	10.145 28.327
7	.0153	.023	57.86	78.47	.581	.553 -10.174	13.702	10.251 31.628
8	.0172	.025	59.06	77.95	.593	.578 -9.596	13.986	10.756 35.548
9	.0183	.027	59.74	77.79	.600	.586 -9.435	14.148	10.906 37.817
10	.0203	.030	60.67	77.57	.609	.598 -9.217	14.366	11.124 41.944
11	.0223	.033	61.37	77.21	.616	.616 -9.051	14.531	11.467 46.070
12	.0243	.036	62.10	76.64	.624	.630 -8.876	14.706	11.727 50.196
13	.0261	.039	62.68	76.85	.629	.635 -8.740	14.843	11.816 53.910
14	.0324	.046	64.40	76.52	.647	.652 -8.333	15.250	12.135 66.908
15	.0395	.058	66.18	76.12	.665	.673 -7.910	15.673	12.523 81.556
16	.0465	.066	67.90	75.77	.682	.691 -7.503	16.080	12.858 95.585
17	.0524	.077	69.03	75.31	.693	.715 -7.237	16.345	13.304 106.170
18	.0593	.088	70.10	75.20	.704	.721 -6.982	16.600	13.414 122.406
19	.0663	.096	71.51	74.98	.718	.732 -6.649	16.934	13.624 136.848
20	.0724	.107	72.46	74.71	.728	.746 -6.420	17.163	13.886 149.433
21	.0793	.117	73.39	74.59	.737	.752 -6.205	17.378	14.001 163.669
22	.0864	.126	74.12	74.28	.744	.768 -6.031	17.552	14.298 176.317
23	.0923	.136	74.93	74.37	.752	.764 -5.838	17.744	14.220 190.489
24	.0997	.147	76.14	74.04	.765	.781 -5.541	18.042	14.532 205.757
25	.1063	.157	76.94	73.95	.773	.785 -5.364	18.218	14.617 219.373
26	.1123	.166	77.46	73.82	.778	.792 -5.235	18.347	14.750 231.752
27	.1194	.176	78.08	73.64	.784	.802 -5.092	18.490	14.925 246.400
28	.1263	.186	78.83	73.60	.792	.804 -4.916	18.667	14.961 260.636
29	.1438	.212	80.47	73.19	.808	.825 -4.526	19.056	15.359 296.741
30	.1611	.238	81.59	72.86	.819	.842 -4.263	19.320	15.673 332.433
31	.1768	.264	83.47	72.73	.838	.849 -3.817	19.766	15.801 368.951
32	.1964	.290	84.96	72.68	.853	.851 -3.464	20.119	15.849 405.262
33	.2137	.315	85.97	72.24	.863	.874 -3.225	20.358	16.271 440.954
34	.2314	.342	87.04	72.02	.874	.886 -2.970	20.612	16.487 477.472
35	.2484	.367	87.96	71.93	.883	.891 -2.754	20.829	16.579 512.545
36	.2663	.393	88.82	71.61	.892	.907 -2.550	21.032	16.885 549.475
37	.2634	.418	89.97	71.53	.903	.911 -2.278	21.304	16.961 584.755
38	.3013	.445	90.57	71.41	.909	.918 -2.135	21.448	17.080 621.685
39	.3311	.489	91.99	71.26	.924	.926 -1.799	21.783	17.227 683.167
40	.3613	.533	92.94	71.01	.933	.938 -1.575	22.008	17.463 745.473
41	.3913	.576	94.06	70.80	.945	.949 -1.308	22.274	17.668 807.367
42	.4219	.623	94.90	70.75	.953	.952 -1.111	22.471	17.719 870.499
43	.4513	.666	95.27	70.55	.957	.962 -1.024	22.559	17.909 931.156
44	.4814	.710	95.78	70.48	.962	.966 -9.902	22.680	17.976 993.256
45	.5117	.755	96.32	70.34	.967	.973 -7.723	22.809	18.117 1055.769
46	.5416	.799	96.83	70.31	.972	.975 -6.554	22.929	18.143 1117.457
47	.5716	.844	96.95	70.21	.974	.980 -6.24	22.958	18.235 1179.351
48	.6013	.887	97.89	70.17	.963	.982 -4.01	23.182	18.278 1240.626
49	.8014	1.183	99.12	69.95	.995	.993 -1.12	23.471	18.489 1653.460
50	1.0014	1.478	99.51	69.87	.999	.998 -0.020	23.563	18.570 2066.087
51	1.2014	1.773	99.63	69.81	1.000	1.001 -0.010	23.592	18.624 2478.715
52	1.4014	2.068	99.48	69.82	1.000	1.000 -0.025	23.558	18.613 2891.342
53	1.6012	2.363	99.65	69.83	1.001	1.000 -0.015	23.598	18.602 3303.551
54	1.8014	2.658	99.66	69.81	1.001	1.001 -0.018	23.601	18.624 3716.597
55	2.0013	2.953	99.61	69.78	1.000	1.002 -0.004	23.587	18.651 4129.018
56	2.2014	3.249	99.65	69.81	1.001	1.001 -0.014	23.597	18.624 4541.852
57	2.4012	3.544	99.66	69.76	1.001	1.003 -0.021	23.604	18.673 4954.066
58	2.6012	3.839	99.53	69.79	1.000	1.001 -0.013	23.569	18.640 5366.694
59	2.8014	4.134	98.98	69.83	1.000	1.000 -0.144	23.438	18.602 5779.734
60	3.0014	4.429	99.11	69.82	1.000	1.000 -0.114	23.469	18.619 6192.361

Table 53.

JOB KLD70 TAPE 3166R- FILES 69-92, RUNS 6.01-6.24 03/27/79

RUN NO. 6. POINT 11. GRID NO. 3

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO $Y^+=35$
FREE STREAM VELOCITY	= 99.159	99.159
FREE STREAM TEMPERATURE	= 70.710	
WALL TEMPERATURE	= 91.960	
WALL HEAT FLUX	= .07763	
FREE STREAM DENSITY	= .07597	
FREE STREAM KINEMATIC VISCOSITY	= .0001611	
DENSITY OF FLUID AT WALL	= .07305	
KINEMATIC VISCOSITY OF FLUID AT WALL	= .0001727	
WALL/FREE STREAM DENSITY RATIO	= .96148	
LOCATION REYNOLDS NUMBER (REX)	= 1862132.25	
INPUT VALUE OF VELOCITY DELTA	= 1.30000	
INPUT VALUE OF TEMPERATURE DELTA	= 1.60000	
CALCULATED DELTA	=	.79721
DELTA 99.5% INPUT	= .00000	
DISPLACEMENT THICKNESS (DELSTAR)	= .09812	.09842
MOMENTUM THICKNESS (THETA)	= .07265	.07274
ENERGY-DISSIPATION THICKNESS	= .13171	.13169
ENTHALPY THICKNESS	= .00293	.00293
SHAPE FACTOR 12 (DELSTAR/THETA)	= 1.35067	1.35297
SHAPE FACTOR 32 (ENERGY/THETA)	= 1.81292	1.81040
MOMENTUM THICKNESS REYNOLDS NUMBER	= 3726.75	3731.45
DISPLACEMENT THICKNESS REYNOLDS NUMBER	= 5033.62	5048.55
SKIN FRICTION COEFFICIENT	= .003357	
FRICITION VELOCITY	= 4.14280	
LAW OF THE WALL CONSTANT (K)	= .41000	
LAW OF THE WALL CONSTANT (C)	= 5.00000	
WAKE STRENGTH	=	.19475
CLAUSERS 'DELTA' INTEGRAL	= -2.17566	-2.28635
CLAUSERS 'G' INTEGRAL	= 12.63266	12.74644
DISPLACEMENT THICKNESS - CONSTANT DENSITY	= .09306	.09552
MOMENTUM THICKNESS - CONSTANT DENSITY	= .07318	.07327
SHAPE FACTOR 12 - CONSTANT DENSITY	= 1.27175	1.30365
LOCATION -X-	36.30000	
Z = CENTERLINE		

Table 54.

JOB KLD70 TAPE 3166R- FILES 69-92, RUNS 6.01-6.24 03/27/79

RUN NO. 6. POINT 11. GRID NO. 3

REDUCED PROFILE DATA

N	Y INCHES	Y/ FT/SEC	U DEG.F	T U/UE	THETA	UTAU	U(+)	T(+)	Y(+)
1	.0043	.005	36.62	85.76	.369	.292	-15.096	8.839	5.805
2	.0056	.007	38.78	84.60	.391	.346	-14.574	9.361	6.887
3	.0063	.008	41.47	83.98	.418	.375	-13.926	10.009	7.464
4	.0075	.009	45.54	82.17	.459	.414	-12.942	10.993	8.227
5	.0085	.011	48.73	82.60	.487	.440	-12.268	11.667	8.755
6	.0101	.013	52.01	81.74	.524	.481	-11.382	12.553	9.557
7	.0114	.014	53.59	81.32	.540	.501	-11.001	12.935	9.951
8	.0128	.016	55.07	80.93	.555	.519	-10.643	13.292	10.322
9	.0147	.018	56.46	80.41	.569	.544	-10.306	13.629	10.809
10	.0163	.020	57.26	80.08	.577	.559	-10.113	13.822	11.119
11	.0183	.023	58.41	79.73	.589	.575	-9.835	14.100	11.439
12	.0201	.025	59.27	79.45	.598	.589	-9.629	14.306	11.707
13	.0215	.027	59.65	79.18	.602	.602	-9.538	14.398	11.960
14	.0237	.030	60.61	79.01	.611	.609	-9.305	14.630	12.115
15	.0253	.032	60.97	78.88	.615	.616	-9.219	14.716	12.237
16	.0277	.035	61.93	78.56	.625	.631	-8.966	14.950	12.539
17	.0292	.037	62.19	78.57	.627	.630	-8.925	15.010	12.529
18	.0356	.045	63.96	78.05	.645	.655	-8.497	15.439	13.014
19	.0424	.053	65.72	77.53	.663	.679	-8.071	15.865	13.498
20	.0494	.062	66.96	77.23	.675	.693	-7.768	16.167	13.784
21	.0555	.070	68.29	76.97	.689	.706	-7.451	16.484	14.029
22	.0625	.078	69.39	76.78	.700	.714	-7.186	16.750	14.201
23	.0693	.087	70.26	76.51	.709	.727	-6.976	16.959	14.453
24	.0755	.095	71.46	76.20	.721	.742	-6.680	17.255	14.747
25	.0824	.103	72.36	75.98	.730	.752	-6.470	17.466	15.951
26	.0893	.112	73.11	75.90	.737	.756	-6.289	17.647	16.025
27	.0953	.120	73.80	75.71	.744	.765	-6.122	17.813	16.203
28	.1025	.129	74.80	75.51	.754	.774	-5.879	18.056	16.393
29	.1097	.138	75.45	75.26	.761	.786	-5.722	18.213	16.624
30	.1155	.145	76.06	75.21	.767	.788	-5.575	18.361	15.673
31	.1224	.154	76.83	75.20	.775	.789	-5.391	18.544	15.679
32	.1293	.162	77.66	75.11	.783	.793	-5.189	18.746	15.763
33	.1466	.184	79.07	74.74	.797	.810	-4.848	19.087	16.111
34	.1642	.206	80.20	74.34	.809	.829	-4.576	19.359	16.489
35	.1817	.228	81.66	74.23	.824	.834	-4.224	19.712	16.589
36	.1995	.250	82.85	74.04	.836	.843	-3.936	19.999	16.766
37	.2166	.272	83.98	73.80	.847	.855	-3.664	20.271	16.989
38	.2343	.294	84.95	73.74	.857	.858	-3.430	20.505	17.049
39	.2517	.316	86.19	73.46	.869	.871	-3.131	20.805	17.308
40	.2696	.336	86.61	73.23	.873	.881	-3.028	20.907	17.523
41	.2869	.360	87.71	73.10	.885	.887	-2.763	21.172	17.641
42	.3045	.382	88.37	72.86	.891	.899	-2.604	21.331	17.866
43	.3394	.426	89.95	72.61	.907	.911	-2.224	21.712	18.102
44	.3743	.470	91.13	72.47	.919	.917	-1.938	21.998	18.238
45	.4095	.514	92.14	72.11	.929	.934	-1.694	22.241	18.572
46	.4445	.558	93.05	71.98	.938	.940	-1.475	22.460	18.693
47	.4795	.602	94.01	71.75	.948	.951	-1.242	22.693	18.911
48	.5144	.645	94.51	71.61	.953	.958	-1.123	22.813	19.040
49	.5494	.689	95.33	71.61	.961	.958	-0.925	23.010	19.036
50	.5845	.733	95.82	71.47	.966	.964	-0.806	23.129	19.173
51	.6195	.777	96.44	71.37	.973	.969	-0.657	23.279	19.266
52	.6545	.821	96.73	71.29	.975	.973	-0.586	23.349	19.339
53	.6894	.865	97.22	71.18	.980	.978	-0.469	23.466	19.437
54	.7243	.909	97.46	71.21	.983	.977	-0.409	23.526	19.417
55	.7593	.952	97.82	71.07	.987	.983	-0.323	23.612	19.542
56	.7943	.996	97.92	71.01	.988	.986	-0.298	23.637	19.605
57	.8293	1.040	97.96	70.99	.988	.987	-0.286	23.646	19.667
58	.8643	1.084	98.29	70.94	.991	.989	-0.210	23.725	19.667
59	.8995	1.128	98.42	70.92	.993	.990	-0.179	23.756	19.682
60	.9347	1.173	98.59	70.95	.994	.989	-0.138	23.797	19.657
61	.9694	1.216	98.65	70.92	.995	.990	-0.122	23.813	19.688
62	1.0046	1.260	98.65	70.91	.995	.991	-0.122	23.813	19.698
63	1.2893	1.617	99.00	70.79	.998	.996	-0.059	23.897	19.803
64	1.5753	1.976	99.16	70.75	1.000	.998	-0.061	23.937	19.839
65	1.8615	2.335	99.15	70.73	1.000	.999	-0.003	23.933	19.865
66	2.1471	2.693	99.16	70.73	1.000	.999	-0.001	23.937	19.865
67	2.4325	3.051	99.05	70.68	.999	1.002	-0.027	23.908	19.912
68	2.7184	3.410	99.08	70.70	.999	1.000	-0.020	23.915	19.886
69	3.0045	3.769	99.01	70.69	.998	1.001	-0.037	23.899	19.896

Table 54.

JOB KLD70 TAPE 3166R- FILES 69-92, RUNS 6.01-6.24 03/27/79

RUN NO. 6. POINT 12. GRID NO. 3

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION	SUBLAYER FUNCTION FROM TO WALL	STANDARD FUNCTION FROM WALL TO Y+ = 35
FREE STREAM VELOCITY	= 99.283		99.283
FREE STREAM TEMPERATURE	= 71.407		
WALL TEMPERATURE	= 92.650		
WALL HEAT FLUX	= .07772		
FREE STREAM DENSITY	= .07587		
FREE STREAM KINEMATIC VISCOSITY	= .0001615		
DENSITY OF FLUID AT WALL	= .07296		
KINEMATIC VISCOSITY OF FLUID AT WALL	= .0001731		
WALL/FREE STREAM DENSITY RATIO	= .96154		
LOCATION REYNOLDS NUMBER (REX)	= 2274682.56		
INPUT VALUE OF VELOCITY DELTA	= 1.30000		
INPUT VALUE OF TEMPERATURE DELTA	= 1.60000		
CALCULATED DELTA			.94764
DELTA 99.5% INPUT	= .00000		
DISPLACEMENT THICKNESS (DELSTAR)	= .11196		.11205
MOMENTUM THICKNESS (THETA)	= .08313		.08331
ENERGY-DISSIPATION THICKNESS	= .15090		.15102
ENTHALPY THICKNESS	= .00344		.00344
SHAPE FACTOR 12 (DELSTAR/THETA)	= 1.34687		1.34491
SHAPE FACTOR 32 (ENERGY/THETA)	= 1.81532		1.81272
MOMENTUM THICKNESS REYNOLDS NUMBER	= 4259.70		4269.14
DISPLACEMENT THICKNESS REYNOLDS NUMBER	= 5737.26		5741.59
SKIN FRICTION COEFFICIENT	= .003299		
FRICTION VELOCITY	= 4.11184		
LAW OF THE WALL CONSTANT (K)	= .41000		
LAW OF THE WALL CONSTANT (C)	= 5.00000		
WAKE STRENGTH			.15631
CLAUSERS 'DELTA' INTEGRAL	= -2.49264		-2.62331
CLAUSERS 'G' INTEGRAL	= 14.47585		14.41140
DISPLACEMENT THICKNESS - CONSTANT DENSITY	= .10590		.10865
MOMENTUM THICKNESS - CONSTANT DENSITY	= .08373		.08393
SHAPE FACTOR 12 - CONSTANT DENSITY	= 1.26470		1.29453
LOCATION -X-	44.38998		
Z = CENTERLINE			

Table 55.

JOB KLD7D TAPE 3166R- FILES 69-92, RUNS 6.01-6.24 03/27/79

RUN NO. 6. POINT 12. GRID NO. 3

REDUCED PROFILE DATA

N	Y INCHES	Y/ DEG.	U FT/SEC	T DEG.F	U/UE	THETA	UTAU	U(+)	T(+)	Y(+)
1	.0053	.006	37.87	85.66	.381	.329	-14.936	9.210	6.477	10.554
2	.0065	.007	41.69	84.49	.414	.384	-14.152	9.993	7.558	12.930
3	.0073	.008	43.95	83.89	.443	.412	-13.458	10.688	8.112	14.514
4	.0085	.009	47.21	83.32	.476	.459	-12.663	11.483	8.641	16.890
5	.0095	.010	49.26	83.00	.496	.486	-11.545	12.601	9.568	22.038
6	.0111	.012	51.61	82.32	.522	.512	-11.096	13.050	10.077	25.206
7	.0127	.013	53.66	81.77	.540	.524	-10.864	13.281	10.308	27.186
8	.0137	.014	54.61	81.52	.550	.540	-10.502	13.644	10.628	30.750
9	.0155	.016	56.10	81.18	.565	.565	-10.124	14.021	11.121	35.304
10	.0178	.019	57.65	80.64	.581	.567	-9.991	14.155	11.157	38.473
11	.0194	.021	58.20	80.61	.586	.580	-9.804	14.342	11.409	42.037
12	.0212	.022	58.97	80.33	.594	.583	-9.671	14.475	11.473	44.809
13	.0226	.024	59.52	80.26	.599	.596	-9.469	14.677	11.722	48.571
14	.0245	.026	60.35	80.00	.608	.610	-9.367	14.779	12.003	52.135
15	.0263	.028	60.77	79.69	.612	.612	-9.294	14.871	12.003	56.095
16	.0283	.030	61.48	79.74	.619	.608	-9.195	14.951	11.959	59.659
17	.0301	.032	61.99	79.66	.624	.612	-9.070	15.075	12.037	59.936
18	.0363	.036	63.45	79.09	.639	.638	-8.713	15.432	12.558	86.568
19	.0437	.046	65.25	78.60	.657	.662	-8.278	15.868	13.018	99.654
20	.0514	.053	66.70	78.25	.672	.678	-7.924	16.221	13.338	112.329
21	.0567	.060	67.89	77.94	.684	.693	-7.635	16.511	13.630	126.169
22	.0637	.067	69.05	77.82	.696	.698	-7.352	16.794	13.739	139.654
23	.0705	.074	69.97	77.60	.705	.708	-7.128	17.017	13.939	151.138
24	.0763	.081	70.96	77.47	.715	.715	-6.887	17.258	14.061	165.394
25	.0835	.088	71.84	77.27	.724	.724	-6.675	17.471	14.251	179.057
26	.0904	.095	72.54	76.95	.731	.739	-6.503	17.642	14.545	190.937
27	.0964	.102	73.26	76.86	.738	.743	-6.328	17.817	14.627	204.996
28	.1035	.109	74.13	76.65	.747	.753	-6.117	18.029	14.817	230.736
29	.1105	.117	74.49	76.54	.750	.759	-6.030	18.116	14.926	218.856
30	.1165	.123	75.49	76.46	.760	.762	-5.787	18.359	14.997	244.201
31	.1233	.130	75.86	76.15	.764	.777	-5.696	18.449	15.284	258.259
32	.1304	.136	76.56	75.97	.771	.785	-5.527	18.619	15.448	292.316
33	.1476	.156	77.86	75.77	.784	.795	-5.210	18.935	15.638	326.014
34	.1651	.174	79.19	75.50	.798	.807	-4.887	19.259	15.886	362.014
35	.1828	.193	80.56	75.07	.811	.818	-4.555	19.591	16.287	416.166
36	.2003	.211	81.30	74.95	.819	.833	-4.372	19.773	16.394	396.665
37	.2177	.230	82.47	74.87	.831	.837	-4.090	20.056	16.470	431.118
38	.2354	.248	83.36	74.49	.840	.855	-3.873	20.272	16.820	466.165
39	.2526	.267	84.26	74.43	.849	.858	-3.654	20.492	16.881	500.222
40	.2707	.286	85.16	74.22	.858	.868	-3.435	20.711	17.072	536.061
41	.2873	.303	86.02	74.10	.866	.873	-3.227	20.919	17.179	568.930
42	.3055	.322	86.55	74.02	.872	.877	-3.096	21.050	17.259	604.967
43	.3405	.359	88.11	73.84	.887	.885	-2.717	21.429	17.423	674.270
44	.3758	.397	89.33	73.37	.900	.908	-2.420	21.725	17.862	744.166
45	.4105	.433	90.39	73.27	.910	.912	-2.163	21.982	17.955	812.674
46	.4457	.470	91.13	73.02	.918	.924	-1.983	22.163	18.181	882.572
47	.4803	.507	92.42	72.90	.931	.930	-1.669	22.477	18.294	951.082
48	.5155	.544	93.08	72.72	.938	.938	-1.508	22.638	18.464	1020.780
49	.5506	.581	93.90	72.64	.946	.942	-1.309	22.836	18.533	1090.280
50	.5857	.618	94.60	72.47	.953	.950	-1.140	23.006	18.694	1159.780
51	.6206	.655	95.06	72.41	.957	.953	-1.028	23.118	18.754	1228.864
52	.6555	.692	95.55	72.32	.962	.957	-0.907	23.239	18.836	1297.988
53	.6905	.729	96.01	72.23	.967	.961	-0.795	23.350	18.915	1367.290
54	.7253	.765	96.41	72.17	.971	.964	-0.699	23.447	18.968	1436.196
55	.7603	.802	96.99	72.08	.977	.973	-0.557	23.588	19.146	1505.998
56	.7953	.839	97.20	72.01	.979	.972	-0.506	23.639	19.117	1574.800
57	.8303	.876	97.30	71.87	.982	.978	-0.434	23.711	19.249	1644.103
58	.8655	.913	97.58	71.84	.983	.980	-0.415	23.731	19.277	1713.801
59	.9005	.950	97.93	71.81	.986	.981	-0.329	23.816	19.308	1783.103
60	.9353	.987	98.09	71.78	.988	.983	-0.289	23.856	19.335	1852.009
61	.9706	1.024	98.12	71.72	.992	.985	-0.282	23.863	19.391	1921.905
62	1.0057	1.061	98.31	71.71	1.000	.994	-0.12	24.134	19.561	2055.722
63	1.2907	1.362	99.23	71.53	1.000	1.000	-0.011	24.135	19.673	3688.712
64	1.5765	1.664	99.26	71.43	1.000	1.000	-0.016	24.162	19.693	4253.424
65	1.8629	1.966	99.24	71.41	1.000	1.001	-0.016	24.184	19.668	4816.335
66	2.1481	2.267	99.35	71.39	1.000	1.000	-0.038	24.184	19.688	5384.632
67	2.4334	2.568	99.44	71.42	1.002	1.001	-0.034	24.179	19.688	5384.632
68	2.7194	2.670	99.42	71.40	1.001	1.002	-0.042	24.188	19.636	5951.325
69	3.0056	3.172	99.46	71.45	1.002	0.998	-0.042	24.188	19.636	5951.325

Table 55.

JOB KLD86 TAPE 3166R- FILES 160-169, RUNS 10.01-10.10 04/12/79

RUN NO. 10. POINT 6. GRID NO. 3

BOUNDARY LAYER PROPERTIES

LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO $Y+=35$
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FREE STREAM VELOCITY =	99.381	99.381
FREE STREAM TEMPERATURE =	70.545	
WALL TEMPERATURE =	92.000	
WALL HEAT FLUX =	.07751	
FREE STREAM DENSITY =	.07622	
FREE STREAM KINEMATIC VISCOSITY =	.0001605	
DENSITY OF FLUID AT WALL =	.07326	
KINEMATIC VISCOSITY OF FLUID AT WALL =	.0001722	
WALL/FREE STREAM DENSITY RATIO =	.96111	
LOCATION REYNOLDS NUMBER (REX) =	2280449.41	
INPUT VALUE OF VELOCITY DELTA =	1.30000	
INPUT VALUE OF TEMPERATURE DELTA =	1.30000	
CALCULATED DELTA =		.98546
DELTA 99.5% INPUT =	.00000	
DISPLACEMENT THICKNESS (DELSTAR) =	.12054	.12052
MOMENTUM THICKNESS (THETA) =	.08946	.08973
ENERGY-DISSIPATION THICKNESS =	.16234	.16256
ENTHALPY THICKNESS =	.00339	.00340
SHAPE FACTOR 12 (DELSTAR/THETA) =	1.34742	1.34317
SHAPE FACTOR 32 (ENERGY/THETA) =	1.81469	1.81163
MOMENTUM THICKNESS REYNOLDS NUMBER =	4615.56	4629.45
DISPLACEMENT THICKNESS REYNOLDS NUMBER =	6219.12	6218.12
SKIN FRICTION COEFFICIENT =	.003201	
FRICTION VELOCITY =	4.05536	
LAW OF THE WALL CONSTANT (K) =	.41000	
LAW OF THE WALL CONSTANT (C) =	5.00000	
WAKE STRENGTH =		.21501
CLAUSERS 'DELTA' INTEGRAL =	-2.71332	-2.87025
CLAUSERS 'G' INTEGRAL =	16.24339	16.05896
DISPLACEMENT THICKNESS - CONSTANT DENSITY =	.11394	.11712
MOMENTUM THICKNESS - CONSTANT DENSITY =	.09010	.09038
SHAPE FACTOR 12 - CONSTANT DENSITY =	1.26451	1.29586

LOCATION -X- 44.20000

Z = -6 INCHES

Table 56.

JOB KLD86 TAPE 3166R- FILES 160-169, RUNS 10.01-10.10 04/12/79

RUN NO. 10. POINT 6. GRID NO. 3

REDUCED PROFILE DATA

N	Y INCHES	Y/ DELTA	U FT/SEC	T DEG.F	U/UE	THETA	UTAU	U(+)	T(+)	Y(+)
1	.0064	.007	42.05	85.03	.423	.325	-14.138	10.368	6.410	12.620
2	.0074	.008	43.29	84.12	.436	.367	-13.830	10.676	7.246	14.583
3	.0086	.009	45.49	82.50	.458	.443	-13.288	11.218	8.737	16.938
4	.0101	.010	48.52	81.98	.488	.467	-12.542	11.964	9.213	19.882
5	.0115	.012	51.00	81.92	.513	.470	-11.930	12.576	9.271	22.630
6	.0126	.013	52.42	81.52	.527	.489	-11.580	12.926	9.644	24.789
7	.0144	.015	53.98	81.00	.543	.512	-11.195	13.311	10.115	28.322
8	.0164	.017	55.46	80.65	.558	.529	-10.830	13.676	10.437	32.247
9	.0184	.019	56.33	80.11	.567	.554	-10.617	13.889	10.935	36.173
10	.0201	.020	57.69	79.79	.580	.569	-10.281	14.225	11.235	39.510
11	.0214	.0224	58.17	79.74	.585	.571	-10.068	14.344	11.275	42.061
12	.0233	.024	58.55	79.52	.589	.582	-10.068	14.438	11.478	45.790
13	.0254	.026	59.46	79.23	.598	.595	-9.845	14.661	11.750	49.912
14	.0274	.028	59.99	78.94	.604	.609	-9.713	14.793	12.012	53.837
15	.0292	.030	61.10	78.71	.615	.620	-9.440	15.666	12.227	57.370
16	.0334	.036	62.35	78.21	.627	.643	-9.130	15.376	12.686	69.539
17	.0425	.043	64.12	77.78	.645	.663	-8.696	15.810	13.082	83.474
18	.0495	.050	65.55	77.57	.660	.672	-8.343	16.163	13.271	97.213
19	.0554	.056	66.54	77.51	.670	.675	-8.099	16.407	13.325	108.794
20	.0624	.063	67.62	76.99	.680	.699	-7.833	16.673	13.805	122.533
21	.0694	.070	68.95	76.80	.694	.709	-7.503	17.003	13.985	136.272
22	.0754	.077	69.64	76.52	.701	.721	-7.335	17.171	14.239	148.048
23	.0823	.084	70.62	76.50	.711	.723	-7.093	17.413	14.263	175.591
24	.0894	.091	71.04	76.35	.715	.729	-6.989	17.517	14.398	175.526
25	.0954	.097	72.16	76.16	.726	.738	-6.712	17.794	14.573	187.302
26	.1023	.104	72.80	76.07	.733	.743	-6.555	17.951	14.655	200.845
27	.1094	.111	73.67	75.95	.741	.748	-6.339	18.167	14.768	214.780
28	.1153	.117	74.15	75.63	.746	.763	-6.223	18.283	15.062	226.360
29	.1225	.124	74.80	75.40	.753	.774	-6.062	18.444	15.271	240.492
30	.1294	.131	75.57	75.43	.760	.772	-5.872	18.634	15.399	254.035
31	.1464	.149	76.86	75.10	.773	.788	-5.554	18.952	15.543	287.401
32	.1642	.167	78.39	74.76	.789	.804	-5.177	19.329	15.861	322.337
33	.1814	.184	79.08	74.46	.796	.818	-5.006	19.500	16.135	356.096
34	.1994	.202	80.51	74.23	.810	.828	-4.653	19.853	16.348	391.425
35	.2165	.220	81.71	74.19	.822	.830	-4.358	20.148	16.385	424.988
36	.2345	.238	82.46	73.86	.830	.846	-4.166	20.340	16.691	460.317
37	.2514	.255	83.05	73.65	.836	.855	-4.026	20.480	16.881	493.486
38	.2694	.273	84.12	73.65	.846	.855	-3.762	20.744	16.879	528.815
39	.2864	.291	85.17	73.26	.857	.874	-3.503	21.003	17.243	562.182
40	.3043	.309	86.02	73.18	.866	.877	-3.294	21.212	17.511	597.314
41	.3393	.344	87.25	72.93	.878	.889	-2.991	21.515	17.539	666.009
42	.3743	.380	88.49	72.71	.890	.899	-2.686	21.820	17.749	734.705
43	.4095	.416	89.77	72.53	.903	.907	-2.370	22.136	17.910	803.792
44	.4445	.451	90.77	72.28	.913	.919	-2.124	22.382	18.139	872.488
45	.4794	.487	91.76	71.97	.923	.934	-1.879	22.627	18.425	940.986
46	.5144	.522	92.52	72.01	.931	.932	-1.691	22.815	18.385	1009.682
47	.5494	.556	93.06	71.82	.936	.941	-1.558	22.948	18.564	1078.377
48	.5844	.593	93.80	71.72	.944	.945	-1.375	23.131	18.652	1147.072
49	.6194	.629	94.61	71.57	.952	.952	-1.177	23.329	18.791	1215.767
50	.6545	.664	95.15	71.34	.957	.963	-1.044	23.462	19.002	1284.659
51	.6894	.700	95.48	71.23	.961	.968	-9.962	23.544	19.103	1353.157
52	.7244	.735	95.79	71.22	.964	.969	-9.886	23.620	19.118	1421.853
53	.7593	.771	96.42	71.11	.970	.974	-7.30	23.776	19.215	1490.352
54	.7946	.806	96.89	71.12	.975	.973	-6.14	23.892	19.206	1559.635
55	.8294	.842	97.22	71.03	.978	.977	-5.32	23.974	19.292	1627.938
56	.8643	.877	97.14	71.05	.977	.976	-5.533	23.953	19.273	1696.437
57	.8943	.913	97.42	70.89	.980	.984	-4.833	24.023	19.421	1765.132
58	.9343	.948	97.80	70.84	.984	.986	-3.90	24.116	19.460	1833.827
59	.9694	.984	97.94	70.93	.985	.982	-3.568	24.150	19.380	1902.719
60	1.0043	1.019	97.93	70.77	.985	.990	-3.54	24.452	19.534	1971.218
61	1.2765	1.295	99.16	70.58	.998	.998	-0.54	24.504	19.703	2505.470
62	1.5494	1.572	99.37	70.54	1.000	1.000	-0.04	24.510	19.744	3041.096
63	1.8223	1.849	99.40	70.55	1.000	1.000	-0.04	24.510	19.733	3576.722
64	2.0951	2.126	99.37	70.55	1.000	1.000	-0.02	24.531	19.733	4112.152
65	2.3674	2.402	99.48	70.51	1.001	1.002	-0.02	24.531	19.769	4646.600
66	2.6405	2.679	99.51	70.52	1.001	1.001	-0.02	24.534	19.759	5482.619
67	2.9137	2.957	99.50	70.49	1.001	1.002	-0.02	24.535	19.785	5718.834
68	3.1862	3.233	99.50	70.51	1.001	1.002	-0.02	24.535	19.769	6253.675
69	3.4583	3.509	99.56	70.54	1.002	1.000	-0.04	24.550	19.743	6787.730
70	3.7313	3.786	99.41	70.56	1.000	1.000	-0.07	24.513	19.718	7323.553
71	4.0044	4.063	99.57	70.55	1.002	1.000	-0.08	24.554	19.733	7859.571

Table 56.

JOB KLD7D TAPE 3166R- FILES 69-92, RUNS 6.01-6.24 03/27/79

RUN NO. 6. POINT 15. GRID NO. 3

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO Y+=35
FREE STREAM VELOCITY =	99.370	99.370
FREE STREAM TEMPERATURE =	71.969	
WALL TEMPERATURE =	93.760	
WALL HEAT FLUX =	.07696	
FREE STREAM DENSITY =	.07579	
FREE STREAM KINEMATIC VISCOSITY =	.0001618	
DENSITY OF FLUID AT WALL =	.07281	
KINEMATIC VISCOSITY OF FLUID AT WALL =	.0001737	
WALL/FREE STREAM DENSITY RATIO =	.96063	
LOCATION REYNOLDS NUMBER (REX) =	2673238.91	
INPUT VALUE OF VELOCITY DELTA =	1.42000	
INPUT VALUE OF TEMPERATURE DELTA =	1.42000	
CALCULATED DELTA =		1.09253
DELTA 99.5% INPUT =	.00000	
DISPLACEMENT THICKNESS (DELSTAR) =	.12853	.12859
MOMENTUM THICKNESS (THETA) =	.09632	.09653
ENERGY-DISSIPATION THICKNESS =	.17524	.17539
ENTHALPY THICKNESS =	.00364	.00364
SHAPE FACTOR 12 (DELSTAR/THETA) =	1.33446	1.33216
SHAPE FACTOR 32 (ENERGY/THETA) =	1.81938	1.81692
MOMENTUM THICKNESS REYNOLDS NUMBER =	4930.75	4941.60
DISPLACEMENT THICKNESS REYNOLDS NUMBER =	6579.88	6583.01
SKIN FRICTION COEFFICIENT =	.003196	
FRICTION VELOCITY =	4.05276	
LAW OF THE WALL CONSTANT (K) =	.41000	
LAW OF THE WALL CONSTANT (C) =	5.00000	
WAKE STRENGTH =		.17071
CLAUSERS 'DELTA' INTEGRAL =	-2.92181	-3.06369
CLAUSERS 'G' INTEGRAL =	16.76415	16.66496
DISPLACEMENT THICKNESS - CONSTANT DENSITY =	.12203	.12495
MOMENTUM THICKNESS - CONSTANT DENSITY =	.09701	.09723
SHAPE FACTOR 12 - CONSTANT DENSITY =	1.25792	1.28510

LOCATION -X- 52.22000

Z = CENTERLINE

Table 57.

JOB KLD70 TAPE 3166R- FILES 69-92, RUNS 6.01-6.24 03/27/79

RUN NO. 6. POINT 15.

GRID NO. 3

REDUCED PROFILE DATA

N	Y INCHES	Y/ DELTA	U FT/SEC	T DEG.F	U/UE	THETA	U-UE	UTAU	U(+)	T(+)	Y(+)
1	.0057	.005	37.63	86.42	.379	.337 -15.234	.9.285	6.750	11.43		
2	.0067	.006	41.10	85.47	.414	.380 -14.377	10.142	7.630	13.08		
3	.0077	.007	44.44	84.59	.447	.421 -13.554	10.965	8.438	15.033		
4	.0091	.008	47.85	83.83	.482	.456 -12.712	11.807	9.135	17.755		
5	.0100	.009	49.56	83.60	.499	.466 -12.292	12.227	9.351	19.505		
6	.0116	.011	52.30	83.02	.526	.493 -11.393	13.126	10.435	22.617		
7	.0131	.012	53.20	82.42	.535	.520 -11.393	13.305	10.637	25.534		
8	.0140	.013	53.92	82.20	.543	.530 -11.214	13.640	10.897	27.284		
9	.0161	.015	55.28	81.92	.556	.543 -10.879	13.977	11.045	31.368		
10	.0181	.017	56.65	81.76	.570	.551 -10.541	14.205	11.279	35.258		
11	.0219	.016	57.57	81.50	.579	.562 -10.314	14.420	11.429	38.758		
12	.0216	.020	58.21	81.34	.586	.570 -10.157	14.636	11.604	42.064		
13	.0224	.021	58.48	81.15	.589	.579 -10.068	14.431	11.808	44.592		
14	.0250	.023	59.34	80.82	.598	.594 -9.866	14.653	11.908	48.676		
15	.0269	.025	60.01	80.60	.604	.604 -9.711	14.808	12.114	52.371		
16	.0289	.026	60.73	80.41	.611	.613 -9.534	14.985	12.289	56.260		
17	.0305	.028	61.02	80.28	.614	.619 -9.463	15.056	12.403	59.372		
18	.0371	.034	62.66	79.85	.631	.638 -9.059	15.460	12.801	72.207		
19	.0437	.040	64.44	79.50	.648	.654 -8.619	15.900	13.120	85.042		
20	.0507	.046	65.72	79.20	.661	.668 -8.302	16.216	13.399	98.655		
21	.0570	.052	66.82	78.95	.672	.682 -8.032	16.487	13.675	110.907		
22	.0639	.059	67.78	78.72	.682	.690 -7.794	16.725	13.841	124.325		
23	.0709	.065	68.83	78.48	.693	.701 -7.536	16.983	14.063	137.938		
24	.0769	.070	69.79	78.25	.702	.712 -7.298	17.221	14.277	149.606		
25	.0837	.077	70.35	78.08	.708	.719 -7.161	17.358	14.425	162.830		
26	.0907	.083	71.43	77.83	.719	.731 -6.895	17.624	14.656	176.43		
27	.0969	.089	72.19	77.71	.726	.736 -6.707	17.812	14.767	188.51		
28	.1039	.095	72.79	77.50	.733	.746 -6.558	17.961	14.961	202.11		
29	.1109	.102	73.52	77.43	.740	.749 -6.378	18.140	15.024	215.727		
30	.1169	.107	74.10	77.45	.746	.748 -6.235	18.284	15.009	227.395		
31	.1237	.113	74.53	77.23	.750	.759 -6.129	18.390	15.214	240.619		
32	.1308	.120	75.30	77.05	.758	.767 -5.940	18.579	15.380	254.426		
33	.1478	.135	76.72	76.82	.772	.777 -5.588	18.931	15.589	287.466		
34	.1656	.152	78.02	76.46	.785	.794 -5.269	19.250	15.916	322.102		
35	.1829	.167	78.97	76.10	.795	.810 -5.033	19.486	16.249	355.746		
36	.2009	.184	80.22	75.99	.807	.815 -4.725	19.794	16.347	390.750		
37	.2179	.199	81.26	75.83	.818	.823 -4.469	20.050	16.495	423.810		
38	.2359	.216	82.43	75.65	.830	.831 -4.280	20.339	16.668	458.815		
39	.2527	.231	83.15	75.42	.837	.841 -4.001	20.517	16.874	491.486		
40	.2709	.248	83.59	75.15	.841	.854 -3.894	20.625	17.123	526.880		
41	.2879	.264	84.54	75.02	.851	.860 -3.659	20.860	17.242	559.940		
42	.3057	.280	85.34	74.86	.859	.867 -3.463	21.058	17.390	594.556		
43	.3541	.324	87.05	74.54	.876	.882 -3.040	21.479	17.685	688.680		
44	.4020	.368	88.61	74.16	.892	.899 -2.656	21.863	18.034	781.831		
45	.4503	.412	90.12	73.88	.907	.912 -2.262	22.237	18.298	875.761		
46	.4979	.456	91.47	73.57	.920	.926 -1.950	22.569	18.578	968.329		
47	.5457	.500	92.35	73.40	.929	.934 -1.733	22.786	18.733	1061.286		
48	.5939	.544	93.13	73.12	.937	.947 -1.541	22.978	18.993	1155.021		
49	.6421	.588	94.19	73.03	.948	.951 -1.279	23.240	19.078	1248.756		
50	.69	.632	94.86	72.78	.955	.963 -1.113	23.406	19.301	1342.296		
51	.73	.675	95.46	72.75	.961	.964 -9.640	23.555	19.335	1435.059		
52	.7859	.719	95.97	72.64	.966	.969 -8.840	23.679	19.433	1528.05		
53	.8341	.763	96.16	72.47	.968	.977 -7.92	23.727	19.589	1622.180		
54	.8819	.807	96.90	72.41	.975	.980 -6.09	23.910	19.648	1715.097		
55	.9299	.851	96.97	72.33	.976	.984 -5.91	23.928	19.722	1808.443		
56	.9779	.895	97.23	72.25	.978	.987 -5.35	23.984	19.793	1901.789		
57	1.0259	.939	97.58	72.27	.982	.986 -4.41	24.078	19.777	1995.135		
58	1.0737	.983	97.69	72.16	.983	.991 -4.15	24.104	19.875	2088.092		
59	1.1217	1.027	98.02	72.11	.986	.993 -3.34	24.185	19.922	2181.438		
60	1.1701	1.071	98.06	72.12	.987	.993 -3.19	24.200	19.914	2275.562		
61	1.2179	1.115	98.57	72.08	.992	.995 -1.98	24.321	19.954	2368.519		
62	1.2659	1.159	98.37	72.05	.990	.996 -2.48	24.371	19.980	2461.865		
63	1.3136	1.202	99.09	72.02	.997	.998 -0.69	24.450	20.006	2554.628		
64	1.3617	1.246	99.09	71.98	.997	1.000 -0.68	24.451	20.042	2648.168		
65	1.4101	1.291	99.15	71.95	.998	1.001 -0.53	24.466	20.070	2742.292		
66	1.4576	1.334	99.19	71.99	.998	1.000 -0.44	24.475	20.032	2834.666		
67	1.5057	1.378	99.37	72.03	1.000	1.000 -0.01	24.520	19.992	2928.207		
68	1.5809	1.722	99.54	71.88	1.002	1.004 -0.60	24.561	20.133	3657.861		
69	2.2557	2.065	99.61	71.82	1.002	1.007 -0.60	24.579	20.189	4386.738		
70	2.6309	2.408	99.66	71.80	1.003	1.008 -0.71	24.590	20.209	5116.393		
71	3.0061	2.752	99.61	71.86	1.002	1.005 -0.60	24.579	20.153	5846.048		

Table 57.

JOB KLD86 TAPE 3166R- FILES 160-169, RUNS 10.01-10.10 04/12/79

RUN NO. 10. POINT 7. GRID NO. 3

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO Y+=35
FREE STREAM VELOCITY =	98.738	98.738
FREE STREAM TEMPERATURE =	70.580	
WALL TEMPERATURE =	93.140	
WALL HEAT FLUX =	.07684	
FREE STREAM DENSITY =	.07622	
FREE STREAM KINEMATIC VISCOSITY =	.0001605	
DENSITY OF FLUID AT WALL =	.07311	
KINEMATIC VISCOSITY OF FLUID AT WALL =	.0001728	
WALL/FREE STREAM DENSITY RATIO =	.95919	
LOCATION REYNOLDS NUMBER (IREX) =	3080367.06	
INPUT VALUE OF VELOCITY DELTA =	1.90000	
INPUT VALUE OF TEMPERATURE DELTA =	1.90000	
CALCULATED DELTA =		1.36442
DELTA 99.5% INPUT =	.00000	
DISPLACEMENT THICKNESS (DELSTAR) =	.15169	.15163
MOMENTUM THICKNESS (THETA) =	.11463	.11490
ENERGY-DISSIPATION THICKNESS =	.20951	.20974
ENTHALPY THICKNESS =	.00489	.00490
SHAPE FACTOR 12 (DELSTAR/THETA) =	1.32332	1.31964
SHAPE FACTOR 32 (ENERGY/THETA) =	1.82776	1.82540
MOMENTUM THICKNESS REYNOLDS NUMBER =	5875.08	5889.18
DISPLACEMENT THICKNESS REYNOLDS NUMBER =	774.63	7771.62
SKIN FRICTION COEFFICIENT =	.003124	
FRICTION VELOCITY =	3.98476	
LAW OF THE WALL CONSTANT (K) =	.41000	
LAW OF THE WALL CONSTANT (C) =	5.00000	
WAKE STRENGTH =		.11885
CLAUSERS 'DELTA' INTEGRAL =	-3.47557	-3.63574
CLAUSERS 'G' INTEGRAL =	19.23045	19.01403
DISPLACEMENT THICKNESS - CONSTANT DENSITY =	.14353	.14673
MOMENTUM THICKNESS - CONSTANT DENSITY =	.11547	.11576
SHAPE FACTOR 12 - CONSTANT DENSITY =	1.24296	1.26752

LOCATION -X- 60.10001

Z = CENTERLINE

Table 58.

JOB KLD86 TAPE 3166R- FILES 160-169, RUNS 10.01-10.10 04/12/79

RUN NO. 10. POINT 7. GRID NO. 3

REDUCED PROFILE DATA

N	Y INCHES	Y'/FT. SEC	U FT./SEC	T DEG.F.	U/UE	THETA	U-UE	UTAU	U(+)	T(+)	Y(+)
1	.0065	.005	40.01	85.17	.405	.353	-14.739	10.040	7.253	12.548	
2	.0076	.006	41.89	84.27	.424	.393	-14.266	10.513	8.072	14.661	
3	.0091	.007	45.56	83.42	.461	.431	-13.344	11.434	8.847	17.544	
4	.0106	.008	48.53	82.90	.492	.454	-12.600	12.179	9.321	20.426	
5	.0115	.008	49.85	82.50	.505	.472	-12.269	12.510	9.684	22.155	
6	.0137	.010	52.38	81.75	.530	.505	-11.635	13.144	10.366	26.383	
7	.0155	.011	53.43	81.36	.541	.522	-11.371	13.407	10.720	29.841	
8	.0175	.013	55.00	81.13	.557	.532	-10.977	13.802	10.924	33.685	
9	.0192	.014	55.96	80.66	.567	.553	-10.736	14.043	11.354	36.951	
10	.0208	.015	56.80	80.45	.575	.563	-10.524	14.255	11.548	40.026	
11	.0230	.017	57.70	80.24	.584	.572	-10.298	14.481	11.736	44.253	
12	.0243	.018	58.00	80.07	.587	.579	-10.223	14.556	11.893	46.751	
13	.0266	.020	59.00	79.92	.598	.586	-9.972	14.807	12.026	51.171	
14	.0281	.021	59.30	79.76	.601	.593	-9.898	14.881	12.171	54.053	
15	.0345	.025	61.04	79.20	.618	.618	-9.460	15.158	12.682	66.351	
16	.0416	.031	62.59	78.78	.634	.636	-9.071	15.708	13.064	79.994	
17	.0485	.036	63.95	78.35	.648	.656	-8.731	16.047	13.457	93.252	
18	.0546	.040	65.18	78.15	.660	.665	-8.422	16.357	13.641	104.974	
19	.0617	.045	66.27	77.83	.671	.679	-8.148	16.631	13.933	118.617	
20	.0666	.050	67.16	77.58	.680	.690	-7.919	16.860	14.154	131.875	
21	.0746	.055	67.93	77.46	.686	.695	-7.731	17.047	14.266	143.404	
22	.0815	.060	68.87	77.38	.697	.698	-7.496	17.283	14.336	156.663	
23	.0884	.065	69.75	77.04	.706	.713	-7.273	17.505	14.646	169.922	
24	.0944	.069	70.31	76.87	.712	.721	-7.134	17.645	14.808	181.451	
25	.1015	.074	71.31	76.84	.722	.723	-6.883	17.896	14.833	195.094	
26	.1085	.080	72.16	76.79	.731	.725	-6.670	18.109	14.877	208.545	
27	.1145	.084	72.62	76.60	.735	.733	-6.554	18.225	15.052	220.074	
28	.1215	.089	73.20	76.46	.741	.739	-6.408	18.371	15.179	233.525	
29	.1285	.094	73.80	76.38	.747	.743	-6.259	18.520	15.250	246.975	
30	.1456	.107	74.94	75.96	.759	.761	-6.971	18.808	15.627	279.834	
31	.1631	.120	76.20	75.68	.772	.774	-5.657	19.422	15.882	313.461	
32	.1806	.132	77.42	75.49	.784	.782	-5.350	19.429	16.058	347.087	
33	.1985	.146	78.58	75.23	.796	.794	-5.059	19.720	16.296	381.483	
34	.2156	.158	79.43	74.87	.804	.810	-4.846	19.933	16.622	414.341	
35	.2335	.171	80.34	74.73	.814	.816	-4.616	20.163	16.749	448.737	
36	.2505	.184	80.80	74.75	.818	.815	-4.502	20.277	16.733	481.403	
37	.2687	.197	82.20	74.53	.833	.825	-4.150	20.620	16.931	516.375	
38	.2854	.209	82.78	74.31	.838	.835	-4.004	20.775	17.133	548.465	
39	.3035	.222	83.47	74.39	.845	.831	-3.831	20.948	17.062	583.244	
40	.3514	.258	84.90	73.85	.860	.855	-3.472	21.306	17.553	675.286	
41	.3994	.293	86.67	73.17	.878	.885	-3.029	21.749	18.168	767.520	
42	.4474	.328	88.38	73.01	.895	.892	-2.600	22.179	18.318	859.754	
43	.4956	.363	89.28	72.80	.904	.902	-2.372	22.407	18.508	952.372	
44	.5437	.399	90.47	72.74	.916	.904	-2.075	22.703	18.561	1044.798	
45	.5915	.434	90.03	72.48	.912	.916	-2.186	22.593	18.796	1136.647	
46	.6396	.469	90.86	72.20	.920	.928	-1.978	22.801	19.052	1229.073	
47	.6876	.504	92.07	72.05	.932	.935	-1.674	23.205	19.193	1321.307	
48	.7355	.539	92.48	71.91	.937	.941	-1.569	23.209	19.321	1413.349	
49	.7837	.574	93.48	71.75	.947	.948	-1.319	23.460	19.464	1505.967	
50	.8316	.610	93.97	71.67	.952	.952	-1.196	23.583	19.537	1598.009	
51	.8795	.645	94.44	71.51	.957	.959	-1.078	23.701	19.682	1690.050	
52	.9274	.680	95.09	71.28	.963	.969	-9.915	23.864	19.892	1782.092	
53	.9755	.715	95.43	71.39	.967	.984	-8.829	23.949	19.787	1874.518	
54	1.0237	.750	95.66	71.19	.969	.973	-7.772	24.007	19.971	1967.136	
55	1.0715	.785	96.02	71.26	.972	.970	-6.881	24.097	19.911	2058.986	
56	1.1194	.820	96.42	71.12	.977	.976	-5.881	24.197	20.034	2151.027	
57	1.1675	.856	96.84	71.12	.981	.976	-4.75	24.303	20.035	2243.453	
58	1.2158	.891	96.88	70.98	.981	.982	-4.66	24.313	20.163	2336.264	
59	1.2636	.926	97.03	71.04	.983	.979	-4.29	24.350	20.106	2428.113	
60	1.3112	.961	97.40	70.95	.986	.984	-3.36	24.443	20.188	2515.578	
61	1.3595	.996	97.39	70.81	.986	.990	-3.38	24.441	20.315	2612.389	
62	1.4074	1.032	97.68	70.80	.989	.990	-2.64	24.515	20.323	2704.430	
63	1.44551	1.066	97.77	70.78	.990	.991	-2.42	24.537	20.344	2796.088	
64	1.5035	1.102	97.97	70.76	.992	.992	-1.94	24.585	20.364	2885.090	
65	1.6606	1.364	98.46	70.65	.997	.997	-0.69	24.710	20.460	3575.271	
66	2.2177	1.625	98.70	70.57	1.000	1.000	-0.09	24.770	20.536	4261.453	
67	2.5745	1.887	98.74	70.58	1.000	1.000	.00	24.780	20.530	4947.057	
68	2.9316	2.149	98.77	70.59	1.000	1.000	.007	24.786	20.515	5633.239	
69	3.2885	2.410	98.77	70.57	1.000	1.000	.008	24.787	20.536	6319.036	
70	3.6461	2.672	98.74	70.56	1.000	1.001	.000	24.779	20.546	7006.178	
71	4.0034	2.934	98.77	70.57	1.000	1.001	.008	24.787	20.540	7692.743	

Table 58.

JOB KLD70 TAPE 3166R- FILES 69-92, RUNS 6.01-6.24 03/27/79

RUN NO. 6. POINT 18. GRID NO. 3

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO $y^+=35$
FREE STREAM VELOCITY	99.159	99.159
FREE STREAM TEMPERATURE	72.069	
WALL TEMPERATURE	94.630	
WALL HEAT FLUX	.07715	
FREE STREAM DENSITY	.07553	
KINEMATIC VISCOSITY	.0001623	
DENSITY OF FLUID AT WALL	.07246	
KINEMATIC VISCOSITY OF FLUID AT WALL	.0001747	
WALL/FREE STREAM DENSITY RATIO	.95930	
LOCATION REYNOLDS NUMBER (REX)	3069175.94	
INPUT VALUE OF VELOCITY DELTA	1.90000	
INPUT VALUE OF TEMPERATURE DELTA	1.90000	
CALCULATED DELTA		1.32203
DISPLACEMENT THICKNESS (DELSTAR)	.00000	
MOMENTUM THICKNESS (THETA)	.15495	.15471
ENERGY-DISSIPATION THICKNESS	.11579	.11624
ENTHALPY THICKNESS	.21087	.21131
SHAPE FACTOR 12 (DELSTAR/THETA)	.00480	.00482
SHAPE FACTOR 32 (ENERGY/THETA)	1.33824	1.33099
MOMENTUM THICKNESS REYNOLDS NUMBER	1.82114	1.81787
DISPLACEMENT THICKNESS REYNOLDS NUMBER	5893.54	5916.42
SKIN FRICTION COEFFICIENT	7886.97	7874.73
FRICITION VELOCITY	.003068	
LAW OF THE WALL CONSTANT (K)	3.96540	
LAW OF THE WALL CONSTANT (C)	.41000	
WAKE STRENGTH	5.00000	.18917
CLAUSERS 'DELTA' INTEGRAL	-3.54638	-3.74826
CLAUSERS 'G' INTEGRAL	20.95349	20.50044
DISPLACEMENT THICKNESS - CONSTANT DENSITY	.14599	.14989
MOMENTUM THICKNESS - CONSTANT DENSITY	.11664	.11711
SHAPE FACTOR 12 - CONSTANT DENSITY	1.25158	1.27995

LOCATION -X- 60.30000

Z = -6 INCHES

Table 59.

JOB KLD70 TAPE 3166R- FILES 69-92, RUNS 6.C1-6.24 03/27/79
 RUN NO. 6. POINT 18. GRID NO. 3

REDUCED PPROFILE DATA

N	INCHES	Y/	U	T	U/UE	THETA	UTAU	U(+)	T(+)	Y(+)
1	.0057	.006	43.74	85.61	.441	.400	-13.976	11.030	8.064	15.754
2	.0097	.007	46.30	85.02	.467	.426	-13.331	11.675	8.588	18.402
3	.0106	.008	47.96	84.30	.484	.458	-12.912	12.094	9.229	20.104
4	.0115	.009	49.32	84.06	.497	.468	-12.569	12.437	9.446	21.806
5	.0123	.009	50.41	83.94	.508	.474	-12.293	12.713	9.558	23.320
6	.0141	.011	52.45	83.27	.529	.504	-11.780	13.226	10.153	26.724
7	.0159	.011	53.49	83.15	.539	.509	-11.517	13.489	10.261	30.128
8	.0165	.013	54.43	82.96	.549	.517	-11.280	13.726	10.433	31.263
9	.0186	.014	55.05	82.47	.555	.539	-11.125	13.881	10.872	34.856
10	.0205	.016	56.12	82.16	.566	.553	-10.854	14.152	11.144	38.828
11	.0225	.017	56.75	81.82	.572	.568	-10.696	14.310	11.452	42.611
12	.0241	.018	57.51	81.64	.580	.576	-10.503	14.503	11.809	45.637
13	.0255	.019	57.84	81.57	.583	.579	-10.421	14.585	11.677	48.284
14	.0275	.021	58.65	81.39	.591	.587	-10.216	14.790	11.832	52.067
15	.0294	.022	59.27	81.13	.598	.598	-10.059	14.948	12.065	55.660
16	.0317	.024	59.76	80.98	.603	.605	-9.935	15.071	12.202	60.010
17	.0331	.025	60.34	80.92	.609	.608	-9.789	15.217	12.250	62.658
18	.0395	.030	61.95	80.48	.625	.627	-9.364	15.622	12.649	74.762
19	.0466	.035	63.25	80.01	.638	.648	-9.055	15.951	13.065	88.190
20	.0533	.040	64.34	79.93	.649	.652	-8.782	16.224	13.409	100.862
21	.0596	.045	65.44	79.63	.660	.665	-8.503	16.503	13.699	112.777
22	.0667	.050	66.64	79.30	.672	.679	-8.200	16.806	13.992	126.205
23	.0733	.055	67.59	79.06	.682	.690	-7.962	17.044	13.913	138.688
24	.0795	.060	68.01	78.85	.686	.700	-7.856	17.150	14.107	150.414
25	.0865	.065	69.29	78.76	.699	.704	-7.533	17.474	14.187	163.653
26	.0934	.071	70.01	78.59	.706	.711	-7.352	17.654	14.339	176.702
27	.0993	.075	70.43	78.43	.710	.718	-7.244	17.762	14.476	187.861
28	.1067	.081	71.27	78.21	.719	.728	-7.033	17.973	14.672	201.856
29	.1135	.086	71.99	78.12	.726	.732	-6.851	18.155	14.752	214.717
30	.1195	.090	72.39	77.82	.730	.745	-6.750	18.256	15.027	226.065
31	.1265	.096	72.87	77.54	.735	.758	-6.630	18.376	15.275	239.304
32	.1336	.101	73.54	77.43	.742	.762	-6.460	18.546	15.370	252.732
33	.1503	.114	74.53	77.35	.752	.766	-6.211	18.795	15.442	284.316
34	.1681	.127	76.10	77.25	.767	.770	-5.815	19.191	15.536	317.981
35	.1859	.141	77.14	76.87	.776	.787	-5.552	19.454	15.878	351.646
36	.2033	.154	78.06	76.45	.787	.806	-5.320	19.686	16.246	384.554
37	.2203	.167	78.81	76.29	.795	.813	-5.131	19.876	16.395	416.706
38	.2364	.180	79.71	76.19	.804	.817	-4.906	20.101	16.482	450.938
39	.2555	.193	80.61	75.95	.813	.828	-4.679	20.328	16.700	483.279
40	.2736	.207	81.21	75.72	.819	.838	-4.527	20.479	16.904	517.511
41	.2906	.220	82.14	75.63	.828	.842	-4.292	20.714	16.981	549.663
42	.3087	.234	82.77	75.68	.835	.840	-4.133	20.873	16.935	583.895
43	.3565	.270	84.72	75.32	.854	.856	-3.642	21.365	17.263	674.299
44	.4045	.306	86.25	74.63	.870	.887	-3.255	21.751	17.879	765.080
45	.4525	.342	88.09	74.45	.886	.894	-2.791	22.215	18.035	855.862
46	.5007	.379	89.06	74.34	.898	.909	-2.548	22.458	18.132	947.021
47	.5463	.415	89.92	74.09	.907	.911	-2.331	22.675	18.362	1037.046
48	.5964	.451	90.76	73.78	.915	.924	-2.118	22.888	16.637	1128.017
49	.6445	.486	91.91	73.66	.927	.930	-1.828	23.178	18.745	1218.988
50	.6924	.524	92.90	73.40	.937	.941	-1.563	23.443	18.975	1309.580
51	.7405	.560	93.44	73.31	.942	.945	-1.441	23.565	19.055	1490.551
52	.7885	.596	94.08	73.29	.949	.946	-1.282	23.724	19.170	1491.332
53	.8365	.633	94.66	72.94	.955	.961	-1.130	23.876	19.389	1582.114
54	.8845	.669	95.03	72.91	.958	.963	-1.041	23.965	19.417	1672.895
55	.9325	.705	95.66	72.95	.965	.961	-8.883	24.123	19.473	1763.677
56	.9807	.742	95.94	72.74	.968	.970	-8.811	23.196	19.569	1854.836
57	1.0263	.778	96.09	72.65	.974	.974	-7.773	23.443	19.649	1944.861
58	1.0763	.814	96.84	72.68	.977	.973	-5.584	24.422	19.614	2035.643
59	1.1244	.851	96.99	72.69	.976	.973	-5.546	24.460	19.610	2126.614
60	1.1725	.887	97.23	72.53	.981	.980	-4.887	24.520	19.751	2217.584
61	1.2207	.923	97.37	72.49	.982	.981	-4.552	24.555	19.790	2308.744
62	1.2667	.960	97.60	72.48	.984	.982	-3.992	24.614	19.800	2399.526
63	1.3161	.996	97.92	72.45	.986	.983	-3.122	24.694	19.827	2488.172
64	1.3645	1.032	97.99	72.40	.988	.985	-2.94	24.712	19.865	2580.710
65	1.4123	1.068	98.22	72.38	.990	.986	-2.38	24.768	19.885	2671.114
66	1.4601	1.104	98.51	72.30	.993	.990	-1.64	24.842	19.958	2761.517
67	1.5087	1.141	98.44	72.31	.993	.989	-1.81	24.825	19.988	2853.433
68	1.8837	1.425	99.03	72.14	.999	.997	-0.34	24.973	20.104	3562.664
69	2.2586	1.708	99.07	72.08	1.000	1.000	-0.034	24.985	20.158	4271.705
70	2.6335	1.992	99.19	72.05	1.000	1.000	-0.007	25.013	20.176	4980.747
71	3.0083	2.276	99.22	72.08	1.000	1.000	-0.014	25.021	20.157	5689.599

Table 59.

JOB KL070 TAPE 3166R- FILES 69-92, RUNS 6.01-6.24 03/27/79

RUN NO. 6. POINT 19. GRID NO. 3

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO $Y^+=35$
FREE STREAM VELOCITY	99.283	99.283
FREE STREAM TEMPERATURE	70.154	
WALL TEMPERATURE	94.020	
WALL HEAT FLUX	.07837	
FREE STREAM DENSITY	.07580	
FREE STREAM KINEMATIC VISCOSITY	.0001613	
DENSITY OF FLUID AT WALL	.07254	
KINEMATIC VISCOSITY OF FLUID AT WALL	.0001744	
WALL/FREE STREAM DENSITY RATIO	.95690	
LOCATION REYNOLDS NUMBER (REX)	3500468.16	
INPUT VALUE OF VELOCITY DELTA	1.90000	
INPUT VALUE OF TEMPERATURE DELTA	1.90000	
CALCULATED DELTA		1.44051
DELTA 99.5% INPUT	.00000	
DISPLACEMENT THICKNESS (DELSTAR)	.16285	.16280
MOMENTUM THICKNESS (THETA)	.12147	.12179
ENERGY-DISSIPATION THICKNESS	.22103	.22130
ENTHALPY THICKNESS	.00577	.00578
SHAPE FACTOR 12 (DELSTAR/THETA)	1.34069	1.33679
SHAPE FACTOR 32 (ENERGY/THETA)	1.81970	1.81711
MOMENTUM THICKNESS REYNOLDS NUMBER	6229.94	6246.37
DISPLACEMENT THICKNESS REYNOLDS NUMBER	8352.39	8350.08
SKIN FRICTION COEFFICIENT	.003055	
FRICTION VELOCITY	3.96652	
LAW OF THE WALL CONSTANT (K)	.41000	
LAW OF THE WALL CONSTANT (C)	5.00000	
WAKE STRENGTH		.15009
CLAUSERS 'DELTA' INTEGRAL	-3.75329	-3.93035
CLAUSERS 'G' INTEGRAL	21.69048	21.44473
DISPLACEMENT THICKNESS - CONSTANT DENSITY	.15352	.15702
MOMENTUM THICKNESS - CONSTANT DENSITY	.12246	.12280
SHAPE FACTOR 12 - CONSTANT DENSITY	1.25360	1.27875
LOCATION -X-	68.25000	
Z = CENTERLINE		

Table 60.

JOB KLD70 TAPE 3166R- FILES 69-92, RUNS 6.01-6.24 03/27/79
 RUN NO. 6. POINT 19. GRID NO. 3

REDUCED PROFILE DATA

N	Y INCHES	Y/	U	T	U/UE	THETA	UTAU	U(+)	T(+)	Y(+)
1	.0071	.005	41.22	85.75	.915	.347	-14.639	10.391	7.286	13.515
2	.0082	.006	43.69	84.82	.940	.385	-14.017	11.014	8.106	15.600
3	.0092	.006	46.23	84.30	.466	.407	-13.374	11.656	8.567	17.495
4	.0101	.007	48.06	83.80	.484	.428	-12.908	12.122	9.002	19.201
5	.0111	.006	49.41	83.28	.498	.450	-12.573	12.452	9.464	21.097
6	.0130	.009	51.66	82.56	.520	.480	-12.006	13.025	10.100	24.698
7	.0142	.010	52.58	82.19	.530	.496	-11.774	13.256	10.423	26.973
8	.0153	.011	53.60	81.85	.540	.510	-11.517	13.513	10.719	29.058
9	.0174	.013	54.74	81.40	.551	.529	-11.229	13.801	11.123	33.038
10	.0194	.013	55.76	81.13	.562	.540	-10.967	14.063	11.356	36.829
11	.0214	.015	56.65	80.94	.571	.548	-10.749	14.282	11.529	40.620
12	.0230	.016	57.41	80.79	.578	.554	-10.558	14.472	11.657	43.653
13	.0245	.017	57.64	80.69	.581	.559	-10.499	14.531	11.745	46.496
14	.0264	.018	58.44	80.43	.589	.569	-10.296	14.734	11.974	50.098
15	.0282	.020	58.88	80.20	.593	.579	-10.167	14.843	12.174	53.510
16	.0304	.021	59.70	79.96	.601	.589	-9.980	15.050	12.390	57.680
17	.0320	.022	60.23	79.78	.607	.597	-9.847	15.183	12.545	60.713
18	.0333	.027	61.51	79.29	.620	.617	-9.524	15.507	12.979	72.654
19	.04555	.032	63.07	78.96	.635	.631	-9.129	15.901	13.272	86.302
20	.05233	.036	64.44	78.58	.649	.647	-8.784	16.247	13.605	99.191
21	.0562	.040	65.27	78.36	.657	.656	-8.575	16.456	13.794	110.375
22	.0652	.045	66.56	78.13	.670	.666	-8.251	16.779	14.002	123.643
23	.0722	.050	67.16	77.70	.677	.684	-8.095	16.936	14.381	136.911
24	.0784	.054	68.30	77.52	.688	.691	-7.811	17.219	14.537	148.664
25	.0852	.059	69.01	77.35	.695	.698	-7.632	17.398	14.687	161.553
26	.09222	.064	69.69	77.28	.702	.701	-7.461	17.569	14.751	174.821
27	.09833	.068	70.49	77.10	.710	.709	-7.259	17.771	14.905	186.384
28	.1055	.073	71.02	76.93	.715	.716	-7.125	17.905	15.057	200.031
29	.1126	.078	71.94	76.71	.725	.725	-6.894	18.136	15.252	213.489
30	.1185	.082	72.76	76.49	.733	.734	-6.688	18.343	15.445	224.673
31	.1252	.087	72.78	76.60	.733	.730	-6.680	18.350	15.347	237.373
32	.1323	.092	73.50	76.67	.740	.727	-6.499	18.531	15.291	250.831
33	.1496	.104	74.32	75.83	.749	.762	-6.294	18.736	16.025	283.623
34	.167C	.116	75.18	75.60	.757	.772	-6.078	18.953	16.234	316.604
35	.1844	.128	76.31	75.44	.769	.779	-5.791	19.239	16.374	349.586
36	.2024	.141	77.35	75.01	.779	.797	-5.529	19.501	16.753	383.705
37	.2192	.152	78.42	74.92	.790	.800	-5.261	19.769	16.832	415.549
38	.2378	.165	79.26	74.76	.798	.807	-5.046	19.982	16.968	450.805
39	.2542	.176	80.03	74.61	.806	.813	-4.834	20.177	17.099	481.891
40	.2724	.189	80.61	74.54	.812	.816	-4.708	20.322	17.163	516.389
41	.2893	.201	81.49	74.49	.821	.818	-4.486	20.544	17.211	548.423
42	.3076	.214	82.09	74.09	.827	.835	-4.333	20.697	17.563	583.111
43	.3554	.247	83.62	73.86	.844	.845	-3.899	21.131	17.764	673.715
44	.4035	.260	85.46	73.54	.861	.858	-3.486	21.545	18.041	764.888
45	.4516	.314	86.76	72.95	.874	.883	-3.157	21.873	18.560	856.062
46	.4995	.347	87.99	72.81	.886	.889	-2.846	22.184	18.689	946.856
47	.5472	.380	89.10	72.55	.897	.900	-2.567	22.463	18.917	1037.271
48	.5955	.413	90.02	72.25	.907	.912	-2.335	22.695	19.179	1128.823
49	.6433	.447	90.96	72.14	.916	.917	-2.099	22.931	19.278	1219.428
50	.6914	.480	92.45	71.97	.931	.924	-1.791	23.306	19.424	1310.601
51	.7394	.513	93.05	71.80	.937	.931	-1.571	23.460	19.574	1401.585
52	.7872	.546	93.98	71.67	.947	.936	-1.338	23.693	19.689	1592.189
53	.8352	.590	94.97	71.50	.951	.947	-1.135	23.795	19.842	1583.173
54	.8832	.613	94.97	71.37	.957	.949	-1.068	23.943	19.954	1674.157
55	.9312	.646	95.48	71.37	.962	.949	-9.559	24.072	19.959	1765.140
56	.9792	.680	95.94	71.22	.966	.955	-8.844	24.187	20.092	1856.124
57	1.0275	.713	96.38	71.05	.971	.962	-7.732	24.299	20.237	1937.676
58	1.0756	.747	96.55	70.95	.973	.967	-6.688	24.342	20.325	2038.850
59	1.1231	.780	96.95	70.87	.976	.970	-5.589	24.442	20.401	2128.885
60	1.1713	.813	96.99	70.87	.977	.970	-5.579	24.451	20.401	2220.248
61	1.2194	.847	97.51	70.74	.982	.975	-4.486	24.583	20.508	2311.421
62	1.2675	.880	97.84	70.65	.985	.979	-3.364	24.666	20.592	2402.595
63	1.3155	.913	97.82	70.69	.985	.978	-3.370	24.666	20.558	2492.631
64	1.3636	.947	97.94	70.64	.986	.980	-3.338	24.692	20.599	2584.752
65	1.4114	.980	98.17	70.53	.989	.984	-2.282	24.748	20.695	2675.356
66	1.4590	1.013	98.25	70.51	.990	.985	-2.261	24.769	20.715	2765.582
67	1.5074	1.046	98.40	70.54	.991	.984	-2.222	24.809	20.689	2857.324
68	1.8825	1.307	99.05	70.30	.998	.994	-0.060	24.971	20.899	3568.323
69	2.2574	1.567	99.27	70.18	1.000	.999	-0.003	25.028	21.002	4278.944
70	2.6326	1.828	99.23	70.10	1.001	.999	-0.013	25.017	21.074	4990.133
71	3.0072	2.088	99.35	70.18	1.001	.999	-0.016	25.046	21.010	5700.184

Table 60.

JOB KLD86 TAPE 3166R- FILES 160-169, RUNS 10.01-10.10 04/12/79

RUN NO. 10. POINT 9. GRID NO. 3

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO $Y+ = 35$
FREE STREAM VELOCITY	= 98.553	98.553
FREE STREAM TEMPERATURE	= 69.650	
WALL TEMPERATURE	= 92.640	
WALL HEAT FLUX	= .07726	
FREE STREAM DENSITY	= .07613	
FREE STREAM KINEMATIC VISCOSITY	= .0001605	
DENSITY OF FLUID AT WALL	= .07296	
KINEMATIC VISCOSITY OF FLUID AT WALL	= .0001730	
WALL/FREE STREAM DENSITY RATIO	= .95838	
LOCATION REYNOLDS NUMBER (REX)	= 3894773.62	
INPUT VALUE OF VELOCITY DELTA	= 2.40000	
INPUT VALUE OF TEMPERATURE DELTA	= 2.40000	
CALCULATED DELTA	= 1.64064	
DELTA 99.5% INPUT	= .00000	
DISPLACEMENT THICKNESS (DELSTAR)	= .19124	.19131
MOMENTUM THICKNESS (THETA)	= .14423	.14436
ENERGY-DISSIPATION THICKNESS	= .26267	.26274
ENTHALPY THICKNESS	= .00614	.00614
SHAPE FACTOR 12 (DELSTAR/THETA)	= 1.32590	1.32522
SHAPE FACTOR 32 (ENERGY/THETA)	= 1.82115	1.82003
MOMENTUM THICKNESS REYNOLDS NUMBER	= 7379.78	7386.28
DISPLACEMENT THICKNESS REYNOLDS NUMBER	= 9784.82	9788.42
SKIN FRICTION COEFFICIENT	= .002922	
FRICTION VELOCITY	= 3.84796	
LAW OF THE WALL CONSTANT (K)	= .41000	
LAW OF THE WALL CONSTANT (C)	= 5.00000	
WAKE STRENGTH	= .21554	
CLAUSERS 'DELTA' INTEGRAL	= -4.61443	-4.74245
CLAUSERS 'G' INTEGRAL	= 26.08754	26.04504
DISPLACEMENT THICKNESS - CONSTANT DENSITY	= .18263	.18517
MOMENTUM THICKNESS - CONSTANT DENSITY	= .14533	.14546
SHAPE FACTOR 12 - CONSTANT DENSITY	= 1.25669	1.27296

LOCATION -X- 76.12000

Z = +6 INCHES

Table 61.

JOB KLD86 TAPE 3166R- FILES 160-169, RUNS 10.01-10.10 04/12/79

RUN NO. 10. POINT 9. GRID NO. 3

REDUCED PROFILE DATA

N	Y INCHES	Y/	U	T	U/UE	THETA	UTAU	U(+)	T(+)	Y(+)
1	.0049	.003	31.00	85.82	.315	.297	-17.556	8.056	5.951	9.136
2	.0060	.004	35.15	84.92	.357	.336	-16.478	9.134	6.735	11.174
3	.0079	.005	42.29	83.73	.429	.388	-14.622	10.989	7.772	14.695
4	.0100	.006	46.40	82.86	.471	.424	-13.554	12.057	8.510	18.586
5	.0120	.007	48.39	82.04	.491	.461	-13.036	12.576	9.241	22.292
6	.0137	.008	50.18	81.63	.509	.479	-12.572	13.039	9.602	25.442
7	.0150	.009	51.00	81.36	.517	.491	-12.359	13.252	9.841	27.851
8	.0171	.010	52.26	81.06	.530	.504	-12.030	13.582	10.100	31.743
9	.0190	.012	53.15	80.59	.539	.524	-11.800	13.812	10.510	35.263
10	.0211	.013	54.46	80.12	.553	.544	-11.460	14.152	10.915	39.155
11	.0227	.014	55.20	79.99	.560	.560	-11.266	14.346	11.029	42.120
12	.0249	.016	56.89	79.44	.577	.574	-10.827	14.785	11.509	53.609
13	.0359	.022	58.44	78.72	.593	.605	-10.425	15.187	12.136	66.580
14	.0430	.026	60.07	78.40	.609	.619	-10.002	15.610	12.420	79.737
15	.0489	.030	61.51	78.15	.624	.630	-9.628	15.984	12.636	90.670
16	.0560	.034	62.83	77.78	.638	.646	-9.282	16.329	12.657	103.826
17	.0630	.038	63.73	77.42	.647	.662	-9.050	16.562	13.271	116.798
18	.0669	.042	64.31	77.45	.653	.664	-8.899	16.713	13.247	127.731
19	.0759	.046	65.44	77.14	.664	.674	-8.605	17.007	13.519	140.702
20	.0830	.051	66.43	77.14	.674	.683	-8.399	17.263	13.514	153.858
21	.0889	.054	66.90	76.94	.679	.689	-8.227	17.385	13.695	164.791
22	.0961	.059	67.93	76.60	.703	.697	-7.958	17.654	13.987	178.133
23	.1030	.063	68.73	76.47	.704	.703	-7.751	17.860	14.098	190.919
24	.1089	.066	69.03	76.35	.709	.709	-7.574	17.938	14.208	201.852
25	.1159	.071	69.52	76.43	.705	.705	-7.546	18.066	14.136	214.824
26	.1230	.075	70.03	75.99	.711	.724	-7.413	18.199	14.519	227.980
27	.1400	.085	71.76	75.65	.728	.739	-6.962	18.650	14.820	259.482
28	.1578	.096	72.86	75.53	.739	.744	-6.677	18.935	14.925	292.466
29	.1751	.107	74.25	75.14	.753	.761	-6.316	19.296	15.261	324.524
30	.1929	.118	75.34	74.90	.764	.772	-6.033	19.579	15.470	357.508
31	.2101	.128	75.76	74.62	.769	.784	-5.923	19.689	15.711	389.381
32	.2280	.139	76.71	74.42	.778	.793	-5.676	19.936	15.893	422.550
33	.2449	.149	77.43	74.30	.786	.798	-5.491	20.121	15.997	453.867
34	.2630	.160	78.41	74.27	.796	.799	-5.236	20.346	16.022	487.407
35	.2799	.171	78.91	74.09	.801	.807	-5.104	20.508	16.178	518.723
36	.2981	.182	79.56	73.96	.808	.813	-4.930	20.682	16.293	552.449
37	.3497	.213	81.48	73.46	.827	.834	-4.437	21.175	16.730	648.066
38	.4009	.244	83.13	73.00	.844	.854	-4.008	21.604	17.127	742.942
39	.4931	.276	84.62	72.96	.859	.856	-3.622	21.990	17.163	839.671
40	.5049	.308	85.70	72.47	.870	.877	-3.340	22.272	17.592	935.659
41	.5569	.339	86.98	72.22	.883	.888	-3.006	22.605	17.804	1032.017
42	.6091	.371	88.39	72.04	.897	.896	-2.642	22.970	17.965	1128.746
43	.6607	.403	89.35	71.69	.907	.911	-2.392	23.220	18.272	1224.364
44	.7128	.434	89.94	71.74	.913	.909	-2.238	23.374	18.229	1320.907
45	.7639	.466	90.90	71.50	.922	.920	-1.989	23.623	18.436	1415.598
46	.8161	.497	91.26	71.25	.926	.930	-1.869	23.723	18.652	1512.327
47	.8680	.529	92.13	71.16	.935	.934	-1.669	23.943	18.735	1608.500
48	.9199	.561	92.94	70.92	.943	.945	-1.458	24.154	18.943	1704.673
49	.9721	.592	93.13	70.86	.945	.948	-1.411	24.201	18.998	1801.402
50	1.0238	.624	93.90	70.62	.953	.958	-1.209	24.403	19.206	1897.205
51	1.0749	.655	94.36	70.69	.958	.955	-1.086	24.526	19.140	1991.895
52	1.1269	.687	94.59	70.66	.960	.956	-1.031	24.581	19.167	2068.254
53	1.1790	.719	95.35	70.29	.967	.972	-8.834	24.778	19.487	2184.798
54	1.2310	.750	95.67	70.32	.971	.971	-7.50	24.862	19.461	2281.156
55	1.2831	.782	95.77	70.26	.972	.973	-7.25	24.887	19.513	2377.700
56	1.3350	.814	96.16	70.14	.976	.979	-6.621	24.991	19.620	2473.873
57	1.3868	.845	96.40	70.12	.978	.980	-5.559	25.053	19.640	2569.861
58	1.4379	.876	96.67	70.08	.981	.981	-4.90	25.122	19.674	2664.551
59	1.4901	.908	96.80	70.05	.982	.983	-4.57	25.155	19.704	2761.280
60	1.5420	.940	97.07	70.07	.985	.982	-3.85	25.227	19.684	2857.454
61	1.5939	.971	97.19	69.90	.986	.989	-3.55	25.257	19.830	2853.627
62	1.6461	1.003	97.26	69.96	.987	.986	-3.37	25.275	19.777	3050.356
63	1.6981	1.035	97.37	69.93	.988	.988	-3.08	25.304	19.806	3146.714
64	2.0261	1.235	98.02	69.79	.995	.994	-2.40	25.472	19.928	3754.514
65	2.3550	1.435	98.33	69.77	.998	.995	-0.59	25.553	19.948	4363.981
66	2.6830	1.635	98.54	69.64	1.000	1.000	-0.04	25.608	20.055	4971.780
67	3.0121	1.836	98.53	69.64	1.000	1.001	-0.06	25.606	20.060	5581.618
68	3.3408	2.036	98.59	69.67	1.000	1.000	-0.10	25.622	20.031	6190.714
69	3.6690	2.236	98.64	69.61	1.001	1.002	-0.21	25.633	20.085	6798.884
70	3.9979	2.437	98.54	69.65	1.000	1.000	-0.05	25.607	20.051	7408.351

Table 61.

JOB KLD86 TAPE 3166R- FILES 160-169, RUNS 10.01-10.10 04/12/79

RUN NO. 10. POINT 10. GRID NO. 3

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO $Y^+=35$
FREE STREAM VELOCITY =	99.281	99.281
FREE STREAM TEMPERATURE =	70.232	
WALL TEMPERATURE =	93.600	
WALL HEAT FLUX =	.07787	
FREE STREAM DENSITY =	.07604	
FREE STREAM KINEMATIC VISCOSITY =	.0001608	
DENSITY OF FLUID AT WALL =	.07282	
KINEMATIC VISCOSITY OF FLUID AT WALL =	.0001736	
WALL/FREE STREAM DENSITY RATIO =	.95766	
LOCATION REYNOLDS NUMBER (REX) =	3915891.00	
INPUT VALUE OF VELOCITY DELTA =	2.10000	
INPUT VALUE OF TEMPERATURE DELTA =	2.40000	
CALCULATED DELTA =		1.56573
DELTA 99.5% INPUT =	.00000	
DISPLACEMENT THICKNESS (DELSTAR) =	.18436	.18442
MOMENTUM THICKNESS (THETA) =	.13896	.13917
ENERGY-DISSIPATION THICKNESS =	.25302	.25315
ENTHALPY THICKNESS =	.00584	.00584
SHAPE FACTOR 12 (DELSTAR/THETA) =	1.32666	1.32514
SHAPE FACTOR 32 (ENERGY/THETA) =	1.82073	1.81905
MOMENTUM THICKNESS REYNOLDS NUMBER =	7146.80	7159.29
DISPLACEMENT THICKNESS REYNOLDS NUMBER =	9484.03	9487.07
SKIN FRICTION COEFFICIENT =	.002944	
FRICTION VELOCITY =	3.89212	
LAW OF THE WALL CONSTANT (K) =	.41000	
LAW OF THE WALL CONSTANT (C) =	5.00000	
WAKE STRENGTH =		.20729
CLAUSERS 'DELTA' INTEGRAL =	-4.40457	-4.55725
CLAUSERS 'G' INTEGRAL =	25.11143	25.00872
DISPLACEMENT THICKNESS - CONSTANT DENSITY =	.17564	.17866
MOMENTUM THICKNESS - CONSTANT DENSITY =	.14001	.14022
SHAPE FACTOR 12 - CONSTANT DENSITY =	1.25447	1.27410
LOCATION -X- =	76.12000	
Z = -6 INCHES		

Table 62.

JOB KLD86 TAPE 3166R- FILES 160-169, RUNS 10.01-10.10 04/12/79
 RUN NO. 10. POINT 10. GRID NO. 3

REDUCED PROFILE DATA

N	INCHES	Y/ INCHES	U/ FT/SEC	T/ DEG.F	U/UE	THETA	UTAU	U-UE	U(+)	T(+)	T(+)
1	.0059	.004	35.63	86.02	.359	.326	-16.353	.0.156	6.677	11.079	
2	.0073	.005	40.65	84.97	.409	.371	-15.064	10.444	7.590	13.694	
3	.0084	.005	43.80	84.34	.441	.398	-14.254	11.254	8.141	15.749	
4	.0124	.007	47.49	83.43	.478	.437	-13.307	12.201	8.938	19.486	
5	.0143	.008	49.97	82.60	.503	.472	-12.669	12.839	9.662	23.222	
6	.0159	.009	51.84	82.03	.522	.496	-12.188	13.320	10.160	26.772	
7	.0172	.010	53.04	81.69	.534	.511	-11.881	13.627	10.455	29.761	
8	.0193	.012	53.62	81.36	.540	.525	-11.731	13.777	10.747	32.189	
9	.0212	.013	54.86	80.98	.553	.541	-11.412	14.096	11.080	36.113	
10	.0233	.015	55.56	80.69	.560	.554	-11.234	14.274	11.330	39.662	
11	.0250	.016	56.14	80.52	.565	.561	-11.084	14.424	11.475	43.586	
12	.0311	.020	58.75	79.63	.592	.599	-10.414	15.094	12.254	58.158	
13	.0364	.024	60.12	79.36	.606	.611	-10.061	15.447	12.495	71.796	
14	.0454	.029	61.45	78.84	.619	.632	-9.720	15.729	12.944	84.873	
15	.0513	.032	63.07	78.75	.636	.637	-9.304	16.204	13.027	95.896	
16	.0583	.037	64.18	78.28	.646	.657	-9.018	16.491	13.439	108.973	
17	.0652	.041	64.63	77.96	.653	.670	-8.852	16.656	13.711	121.864	
18	.0715	.045	65.80	77.73	.663	.680	-8.603	16.906	13.915	133.634	
19	.0761	.049	66.74	77.61	.672	.685	-8.360	17.148	14.022	145.964	
20	.0853	.054	67.37	77.50	.679	.690	-8.198	17.310	14.118	159.415	
21	.0913	.058	68.19	77.45	.687	.692	-8.068	17.520	14.163	170.625	
22	.0983	.062	68.87	77.21	.694	.702	-7.815	17.694	14.370	183.702	
23	.1055	.067	69.85	76.86	.704	.717	-7.562	17.946	14.672	197.153	
24	.1114	.070	70.02	76.85	.705	.718	-7.518	17.990	14.685	208.176	
25	.1184	.075	70.63	76.60	.711	.728	-7.362	18.146	14.907	221.253	
26	.1253	.079	71.32	76.45	.718	.735	-7.185	18.323	15.035	234.144	
27	.1423	.090	73.00	76.16	.735	.747	-6.753	18.755	15.283	265.904	
28	.1599	.101	74.04	75.79	.746	.763	-6.486	19.022	15.607	298.785	
29	.1774	.112	74.89	75.62	.754	.770	-6.268	19.240	15.763	331.479	
30	.1951	.123	76.10	75.50	.766	.775	-5.956	19.552	15.863	364.546	
31	.2123	.134	76.92	75.01	.775	.796	-5.745	19.763	16.295	396.679	
32	.2301	.145	77.82	74.99	.784	.797	-5.514	19.994	16.312	429.934	
33	.2473	.156	78.71	75.05	.793	.794	-5.285	20.223	16.258	462.067	
34	.2653	.167	79.30	74.51	.799	.817	-5.133	20.375	16.726	495.695	
35	.2824	.178	80.01	74.35	.806	.824	-4.951	20.557	16.871	527.642	
36	.3002	.189	80.78	74.35	.814	.824	-4.754	20.754	16.869	560.896	
37	.3519	.222	82.74	73.98	.833	.840	-4.251	21.257	17.190	657.483	
38	.4034	.254	83.93	73.43	.845	.863	-3.943	21.565	17.668	753.697	
39	.4553	.287	85.71	73.23	.863	.872	-3.486	22.022	17.848	850.657	
40	.5074	.320	86.78	72.93	.874	.885	-3.211	22.297	18.111	947.992	
41	.5595	.353	87.92	72.49	.886	.904	-2.920	22.588	18.492	1045.326	
42	.6114	.386	89.13	72.43	.898	.906	-2.609	22.899	18.548	1142.287	
43	.6629	.418	89.96	72.08	.906	.921	-2.395	23.113	18.852	1238.500	
44	.7149	.451	90.90	72.00	.916	.924	-2.154	23.354	18.918	1335.648	
45	.7664	.483	91.84	71.91	.925	.928	-1.912	23.596	18.999	1431.861	
46	.8183	.516	92.47	71.58	.931	.947	-1.751	23.757	19.376	1528.822	
47	.8703	.549	92.90	71.34	.936	.953	-1.640	23.869	19.496	1625.969	
48	.9223	.582	93.67	71.39	.943	.951	-1.442	24.066	19.454	1723.117	
49	.9743	.614	94.69	71.09	.954	.963	-1.179	24.329	19.714	1820.264	
50	1.0260	.647	94.72	71.10	.954	.963	-1.171	24.337	19.712	1916.851	
51	1.0774	.679	95.44	71.09	.961	.963	-1.056	24.522	19.713	2012.878	
52	1.1293	.712	95.79	70.98	.965	.968	-0.898	24.610	19.815	2109.838	
53	1.1814	.745	95.98	70.98	.967	.968	-0.848	24.660	19.815	2207.173	
54	1.2331	.778	96.48	70.93	.972	.970	-0.720	24.788	19.855	2303.760	
55	1.2854	.811	96.72	70.77	.974	.977	-0.659	24.850	19.995	2401.468	
56	1.3374	.843	97.03	70.78	.977	.976	-0.578	24.930	19.984	2498.615	
57	1.3890	.876	97.36	70.77	.981	.977	-0.492	25.016	19.993	2595.016	
58	1.4405	.908	97.49	70.55	.982	.986	-0.460	25.049	20.185	2691.229	
59	1.4922	.941	97.63	70.61	.983	.984	-0.424	25.084	20.135	2787.816	
60	1.5442	.974	97.95	70.63	.987	.983	-0.342	25.166	20.122	2884.964	
61	1.5961	1.007	98.03	70.57	.987	.986	-0.322	25.186	20.171	2981.924	
62	1.6483	1.039	98.22	70.54	.989	.987	-0.272	25.236	20.195	3079.445	
63	1.7003	1.072	98.45	70.53	.992	.987	-0.213	25.295	20.209	3176.593	
64	2.0285	1.279	98.81	70.38	.995	.994	-0.121	25.388	20.341	3789.743	
65	2.3575	1.487	99.23	70.35	1.000	1.000	-0.013	25.496	20.360	4404.588	
66	2.6853	1.693	99.23	70.22	1.000	1.000	-0.012	25.533	20.472	5016.791	
67	3.0142	1.901	99.36	70.21	1.001	1.000	-0.025	25.576	20.443	6245.520	
68	3.3430	2.108	99.15	70.26	1.000	1.000	-0.002	25.610	20.472	6858.857	
69	3.6713	2.315	99.29	70.22	1.000	1.000	-0.009	25.6499	20.428	7473.689	
70	4.0004	2.523	99.24	70.28	1.000	1.000	-0.009	25.681	20.428		

Table 62.

JOB KLD70 TAPE 3166R- FILES 69-92, RUNS 6.01-6.24 03/27/79

RUN NO. 6. POINT 24. GRID NO. 3

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO $y+=35$
FREE STREAM VELOCITY	= 99.510	99.510
FREE STREAM TEMPERATURE	= 69.100	
WALL TEMPERATURE	= 92.540	
WALL HEAT FLUX	= .07710	
FREE STREAM DENSITY	= .07488	
FREE STREAM KINEMATIC VISCOSITY	= .0001631	
DENSITY OF FLUID AT WALL	= .07170	
KINEMATIC VISCOSITY OF FLUID AT WALL	= .0001761	
WALL/FREE STREAM DENSITY RATIO	= .95755	
LOCATION REYNOLDS NUMBER (REX)	= 4282038.69	
INPUT VALUE OF VELOCITY DELTA	= 2.40000	
INPUT VALUE OF TEMPERATURE DELTA	= 2.40000	
CALCULATED DELTA		1.73979
DELTA 99.5% INPUT	= .00000	
DISPLACEMENT THICKNESS (DELSTAR)	= .19731	.19717
MOMENTUM THICKNESS (THETA)	= .14844	.14880
ENERGY-DISSIPATION THICKNESS	= .27040	.27073
ENTHALPY THICKNESS	= .00641	.00642
SHAPE FACTOR 12 (DELSTAR/THETA)	= 1.32928	1.32504
SHAPE FACTOR 32 (ENERGY/THETA)	= 1.82163	1.81936
MOMENTUM THICKNESS REYNOLDS NUMBER	= 7548.85	7567.53
DISPLACEMENT THICKNESS REYNOLDS NUMBER	= 10034.51	10027.26
SKIN FRICTION COEFFICIENT	= .002930	
FRICTION VELOCITY	= 3.89240	
LAW OF THE WALL CONSTANT (K)	= .41000	
LAW OF THE WALL CONSTANT (C)	= 5.00000	
WAKE STRENGTH		.17959
CLAUSERS 'DELTA' INTEGRAL	= -4.68044	-4.87665
CLAUSERS 'G' INTEGRAL	= 27.00375	26.65151
DISPLACEMENT THICKNESS - CONSTANT DENSITY	= .18699	.19075
MOMENTUM THICKNESS - CONSTANT DENSITY	= .14959	.14998
SHAPE FACTOR 12 - CONSTANT DENSITY	= 1.25003	1.27190
LOCATION -X-	84.20000	
Z = CENTERLINE		

Table 63.

JOB KLD7D TAPE 3166R- FILES 69-92, RUNS 6.01-6.24 03/27/79

RUN NO. 6. POINT 24. GRID NO. 3

REDUCED PROFILE DATA

N	Y INCHES	Y/ DELT A	U FT/SEC	T DEG.F	U/UE	THETA	UTAU	U(+)	T(+)	Y(+)
1	.0078	.005	41.87	83.78	.421	.374	-14.8C7	10.758	7.607	14.426
2	.0089	.005	43.50	83.16	.437	.400	-14.390	11.176	8.145	16.452
3	.0103	.006	45.80	82.53	.460	.427	-13.798	11.767	8.696	17.031
4	.0111	.006	47.35	82.29	.476	.437	-13.400	12.165	8.905	20.505
5	.0119	.007	48.60	82.12	.488	.444	-13.079	12.487	9.049	21.979
6	.0137	.008	50.57	81.31	.508	.479	-12.574	12.992	9.758	25.295
7	.0149	.009	51.55	81.06	.518	.490	-12.322	13.482	9.976	27.506
8	.0162	.009	52.48	80.90	.527	.497	-12.083	13.735	10.114	29.901
9	.0179	.010	53.46	80.64	.537	.508	-11.830	10.342	33.033	
10	.0199	.011	54.56	80.25	.548	.524	-11.547	14.018	10.677	36.718
11	.0218	.013	55.13	79.95	.554	.537	-11.403	14.162	10.934	40.218
12	.0237	.014	56.37	79.56	.566	.554	-11.083	14.482	11.278	43.719
13	.0253	.015	56.74	79.51	.570	.556	-10.988	14.577	11.321	46.667
14	.0273	.016	57.38	79.34	.577	.563	-10.824	14.741	11.466	50.351
15	.0295	.017	57.99	79.39	.583	.561	-10.666	14.899	11.420	54.405
16	.0311	.018	58.52	79.24	.588	.567	-10.530	15.036	11.550	57.352
17	.0327	.019	59.06	79.02	.594	.577	-10.392	15.173	11.748	60.300
18	.0368	.022	60.25	78.48	.605	.600	-10.087	15.213	12.213	71.538
19	.0460	.026	61.86	78.26	.622	.609	-9.667	15.898	12.405	84.803
20	.0531	.031	63.20	77.72	.635	.632	-9.329	16.237	12.878	97.684
21	.0593	.034	64.00	77.36	.643	.648	-9.123	16.442	13.189	109.306
22	.0659	.038	65.13	77.15	.654	.657	-8.834	16.732	13.369	121.466
23	.0729	.042	65.88	76.97	.662	.664	-8.639	16.926	13.529	134.362
24	.0789	.045	66.86	76.84	.672	.670	-8.368	17.177	13.643	145.416
25	.0860	.049	67.49	76.70	.678	.676	-8.227	17.338	13.764	156.497
26	.0929	.053	68.43	76.46	.688	.686	-7.986	17.579	13.972	171.209
27	.0993	.057	68.82	76.21	.692	.697	-7.886	17.680	14.190	183.000
28	.1060	.061	68.99	76.11	.693	.701	-7.842	17.723	14.272	195.344
29	.1131	.065	70.08	75.97	.704	.707	-7.560	18.005	14.391	208.425
30	.1191	.068	70.54	75.81	.709	.714	-7.444	18.122	14.536	219.479
31	.1259	.072	70.55	75.67	.709	.720	-7.441	18.124	14.655	232.007
32	.1329	.076	71.60	75.55	.720	.725	-7.170	18.396	14.759	244.903
33	.1405	.087	73.11	75.19	.735	.740	-6.783	18.782	15.074	277.329
34	.1477	.096	73.88	74.89	.742	.753	-6.586	18.980	15.335	309.017
35	.1548	.106	75.15	74.71	.755	.761	-6.259	19.306	15.492	340.521
36	.2031	.117	75.70	74.43	.761	.773	-6.117	19.448	15.736	374.236
37	.2200	.126	76.84	74.37	.772	.775	-5.825	19.740	15.785	375.372
38	.2382	.137	77.61	74.05	.782	.789	-5.576	19.989	16.064	438.902
39	.2548	.146	78.36	73.95	.787	.793	-5.434	20.131	16.153	469.485
40	.2729	.157	79.14	73.67	.795	.805	-5.232	20.333	16.396	502.832
41	.2901	.167	79.90	73.52	.803	.811	-5.038	20.527	16.521	534.520
42	.3083	.177	80.54	73.36	.809	.818	-4.874	20.692	16.658	568.051
43	.3597	.207	81.83	72.81	.822	.842	-4.543	21.222	17.143	662.748
44	.4109	.236	83.58	72.74	.840	.845	-4.091	21.474	17.201	757.076
45	.4628	.266	85.27	72.39	.857	.860	-3.658	21.907	17.502	852.694
46	.5149	.296	86.45	72.18	.869	.869	-3.354	22.211	17.686	948.680
47	.5669	.326	87.60	71.94	.880	.879	-3.061	22.505	17.896	1044.482
48	.6193	.356	88.45	71.48	.889	.898	-2.842	22.723	18.295	1141.021
49	.6707	.386	89.61	71.34	.900	.905	-2.544	23.21	18.418	1235.718
50	.7227	.415	90.62	71.39	.911	.902	-2.285	23.280	18.370	1331.520
51	.7741	.445	90.92	70.93	.914	.922	-2.028	23.357	18.772	1426.216
52	.8261	.475	92.06	70.79	.925	.928	-1.914	23.651	18.892	1522.019
53	.8780	.505	92.74	70.52	.932	.939	-1.740	23.825	19.130	1617.636
54	.9299	.535	93.16	70.41	.936	.944	-1.630	23.935	19.222	1713.254
55	.9819	.564	93.92	70.27	.944	.950	-1.437	24.122	19.350	1809.056
56	1.0337	.594	94.28	70.20	.947	.953	-1.343	24.222	19.408	1904.490
57	1.0851	.624	94.97	70.22	.954	.952	-1.166	24.400	19.387	1999.186
58	1.1369	.653	95.49	70.09	.960	.958	-1.032	24.533	19.504	2094.620
59	1.1888	.683	95.79	69.93	.963	.964	-9.56	24.610	19.639	2190.238
60	1.2412	.713	95.89	69.87	.964	.967	-9.29	24.636	19.697	2286.777
61	1.2928	.743	96.55	69.80	.970	.970	-7.60	24.806	19.753	2381.842
62	1.3449	.773	96.83	69.74	.973	.973	-6.88	24.877	19.806	2477.828
63	1.3967	.803	97.10	69.62	.976	.978	-6.19	24.946	19.908	2573.590
64	1.4479	.832	97.33	69.56	.978	.981	-5.59	25.006	19.967	2667.590
65	1.4999	.862	97.55	69.53	.980	.982	-5.03	25.062	19.99	2763.392
66	1.5521	.892	97.65	69.48	.981	.984	-4.78	25.088	20.029	2859.563
67	1.6041	.922	97.94	69.51	.984	.983	-4.03	25.162	20.011	2955.365
68	1.6559	.952	98.13	69.33	.986	.990	-3.54	25.211	20.167	3050.785
69	1.7080	.982	98.42	69.40	.989	.987	-2.79	25.286	20.202	3146.337
70	2.1409	1.231	99.20	69.19	.997	.996	-0.79	25.486	20.355	3944.337
71	2.5739	1.479	99.53	69.11	1.000	1.000	-0.06	25.571	20.379	4742.073
72	3.0080	1.729	99.49	69.08	1.000	1.001	-0.06	25.560	20.379	5541.836

Table 63.

JOB KLO74 TAPE 3166P- FILES 136-159, RUNS 9.01-9.22 74/17/79

RUN NO. 9. POTNT 3. GRID NO. 4

SECONDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO $Y^+=35$
FREE STREAM VELOCITY	100.573	100.573
FREE STREAM TEMPERATURE	68.762	
WALL TEMPERATURE	84.755	
WALL HEAT FLUX	•E7838	
FREE STREAM DENSITY	•E7517	
FREE STREAM KINEMATIC VISCOSITY	•E001613	
DENSITY OF FLUID AT WALL	•E7297	
KINEMATIC VISCOSITY OF FLUID AT WALL	•E001711	
WALL/FREE STREAM DENSITY RATIO	•E7067	
LOCATION REYNOLDS NUMBER (REX)	627255.81	
INPUT VALUE OF VELOCITY DELTA	•41800	
INPUT VALUE OF TEMPERATURE DELTA	•41800	
CALCULATED DELTA		.28463
DELTA 29.52 INPUT	•E00000	
DISPLACEMENT THICKNESS (DELSTAR)	•E25557	•E3568
MOMENTUM THICKNESS (THETA)	•E25222	•E2543
ENERGY-DISSIPATION THICKNESS	•E4555	•E4560
ENTHALPY THICKNESS	•E00061	•E0081
SHAPE FACTOR 12 (DELSTAR/THETA)	1.41045	1.40323
SHAPE FACTOR 32 (ENERGY/THETA)	1.80514	1.79693
MOMENTUM THICKNESS REYNOLDS NUMBER	1701.79	1312.61
DISPLACEMENT THICKNESS REYNOLDS NUMBER	1836.16	1841.89
SKIN FRICTION COEFFICIENT	•E04383	
FRICITION VELOCITY	•E77892	
LAW OF THE WALL CONSTANT (K)	•41800	
LAW OF THE WALL CONSTANT (C)	5.00000	
WAKE STRENGTH		.04132
CLAUSERS "DELTA" INTEGRAL	-•E4742	•E73394
CLAUSERS "G" INTEGRAL	•E15755	•E11236
DISPLACEMENT THICKNESS - CONSTANT DENSITY	•E3262	•E3487
MOMENTUM THICKNESS - CONSTANT DENSITY	•E2537	•E2550
SHAPE FACTOR 12 - CONSTANT DENSITY	1.28464	1.36268

LOCATION -X- 12.15700

Z = CENTERLINE

Table 64.

JCB KLD74 TAPE 31660- FILES 13P-159, RUNS 9.01-9.22 04/17/79

RUN NO. 9. POINT 3. GRID NO. 4

REDUCED PROFILE DATA

Y/	U	T	U/UF	THETA	UTAU	U(+)	74+1	Y(+)
1	1.5	42.4	.79.87	.422	.348 -12.174	8.072	6.261	1.6.77
2	1.5	45.8	.79.12	.415	.11.457	9.598	7.740	1.6.171
3	1.5	50.2	.77.79	.517	.496 -10.375	12.675	7.240	1.6.498
4	1.5	54.4	.76.22	.543	.461 -9.518	11.587	6.441	1.6.926
5	1.5	59.0	.76.27	.596	.571 -8.498	12.587	9.657	1.6.540
6	1.5	63.7	.75.79	.619	.675 -7.841	13.528	9.776	1.6.240
7	1.5	67.8	.76.57	.627	.675 -7.275	14.528	10.255	1.6.907
8	1.5	71.1	.75.12	.654	.603 -6.775	14.028	11.111	1.6.227
9	1.5	74.6	.74.98	.668	.673 -6.275	14.528	10.764	1.6.958
10	1.5	76.6	.74.55	.678	.605 -5.775	14.028	11.446	1.6.249
11	1.5	79.7	.74.19	.697	.662 -5.275	14.528	11.446	1.6.249
12	1.5	82.1	.73.75	.712	.673 -4.775	14.028	11.446	1.6.249
13	1.5	84.6	.73.51	.716	.605 -4.275	14.528	11.446	1.6.249
14	1.5	86.8	.73.12	.721	.674 -3.775	14.028	11.446	1.6.249
15	1.5	88.7	.72.72	.721	.741 -3.275	14.528	12.428	1.6.788
16	1.5	90.5	.72.19	.722	.665 -2.775	14.028	12.213	1.6.171
17	1.5	92.0	.71.77	.722	.605 -2.275	14.528	13.471	1.6.775
18	1.5	93.4	.71.32	.722	.673 -1.775	14.028	13.994	1.6.213
19	1.5	94.7	.70.88	.722	.605 -1.275	14.528	14.149	1.6.522
20	1.5	95.9	.70.43	.722	.673 -0.775	14.028	14.521	1.6.905
21	1.5	96.9	.70.00	.722	.605 -0.275	14.528	15.096	1.6.260
22	1.5	97.7	.69.55	.722	.673 0.325	14.028	15.371	1.6.788
23	1.5	98.4	.69.12	.722	.605 0.825	14.528	15.371	1.6.788
24	1.5	98.9	.68.68	.722	.673 1.325	14.028	15.371	1.6.788
25	1.5	99.3	.68.24	.722	.605 1.825	14.528	15.371	1.6.788
26	1.5	99.6	.67.79	.722	.673 2.325	14.028	15.371	1.6.788
27	1.5	99.8	.67.35	.722	.605 2.825	14.528	15.371	1.6.788
28	1.5	99.9	.66.90	.722	.673 3.325	14.028	15.371	1.6.788
29	1.5	99.9	.66.46	.722	.605 3.825	14.528	15.371	1.6.788
30	1.5	99.9	.66.01	.722	.673 4.325	14.028	15.371	1.6.788
31	1.5	99.9	.65.56	.722	.605 4.825	14.528	15.371	1.6.788
32	1.5	99.9	.65.11	.722	.673 5.325	14.028	15.371	1.6.788
33	1.5	99.9	.64.66	.722	.605 5.825	14.528	15.371	1.6.788
34	1.5	99.9	.64.21	.722	.673 6.325	14.028	15.371	1.6.788
35	1.5	99.9	.63.76	.722	.605 6.825	14.528	15.371	1.6.788
36	1.5	99.9	.63.31	.722	.673 7.325	14.028	15.371	1.6.788
37	1.5	99.9	.62.86	.722	.605 7.825	14.528	15.371	1.6.788
38	1.5	99.9	.62.41	.722	.673 8.325	14.028	15.371	1.6.788
39	1.5	99.9	.61.96	.722	.605 8.825	14.528	15.371	1.6.788
40	1.5	99.9	.61.51	.722	.673 9.325	14.028	15.371	1.6.788
41	1.5	99.9	.60.96	.722	.605 9.825	14.528	15.371	1.6.788
42	1.5	99.9	.60.51	.722	.673 10.325	14.028	15.371	1.6.788
43	1.5	99.9	.59.96	.722	.605 10.825	14.528	15.371	1.6.788
44	1.5	99.9	.59.51	.722	.673 11.325	14.028	15.371	1.6.788
45	1.5	99.9	.58.96	.722	.605 11.825	14.528	15.371	1.6.788
46	1.5	99.9	.58.51	.722	.673 12.325	14.028	15.371	1.6.788
47	1.5	99.9	.57.96	.722	.605 12.825	14.528	15.371	1.6.788
48	1.5	99.9	.57.51	.722	.673 13.325	14.028	15.371	1.6.788
49	1.5	99.9	.56.96	.722	.605 13.825	14.528	15.371	1.6.788
50	1.5	99.9	.56.51	.722	.673 14.325	14.028	15.371	1.6.788
51	1.5	99.9	.55.96	.722	.605 14.825	14.528	15.371	1.6.788
52	1.5	99.9	.55.51	.722	.673 15.325	14.028	15.371	1.6.788
53	1.5	99.9	.54.96	.722	.605 15.825	14.528	15.371	1.6.788
54	1.5	99.9	.54.51	.722	.673 16.325	14.028	15.371	1.6.788
55	1.5	99.9	.53.96	.722	.605 16.825	14.528	15.371	1.6.788
56	1.5	99.9	.53.51	.722	.673 17.325	14.028	15.371	1.6.788
57	1.5	99.9	.52.96	.722	.605 17.825	14.528	15.371	1.6.788
58	1.5	99.9	.52.51	.722	.673 18.325	14.028	15.371	1.6.788
59	1.5	99.9	.51.96	.722	.605 18.825	14.528	15.371	1.6.788
60	1.5	99.9	.51.51	.722	.673 19.325	14.028	15.371	1.6.788
61	1.5	99.9	.50.96	.722	.605 19.825	14.528	15.371	1.6.788
62	1.5	99.9	.50.51	.722	.673 20.325	14.028	15.371	1.6.788
63	1.5	99.9	.49.96	.722	.605 20.825	14.528	15.371	1.6.788
64	1.5	99.9	.49.51	.722	.673 21.325	14.028	15.371	1.6.788
65	1.5	99.9	.48.96	.722	.605 21.825	14.528	15.371	1.6.788
66	1.5	99.9	.48.51	.722	.673 22.325	14.028	15.371	1.6.788
67	1.5	99.9	.47.96	.722	.605 22.825	14.528	15.371	1.6.788
68	1.5	99.9	.47.51	.722	.673 23.325	14.028	15.371	1.6.788
69	1.5	99.9	.46.96	.722	.605 23.825	14.528	15.371	1.6.788
70	1.5	99.9	.46.51	.722	.673 24.325	14.028	15.371	1.6.788
71	1.5	99.9	.45.96	.722	.605 24.825	14.528	15.371	1.6.788
72	1.5	99.9	.45.51	.722	.673 25.325	14.028	15.371	1.6.788
73	1.5	99.9	.44.96	.722	.605 25.825	14.528	15.371	1.6.788
74	1.5	99.9	.44.51	.722	.673 26.325	14.028	15.371	1.6.788
75	1.5	99.9	.43.96	.722	.605 26.825	14.528	15.371	1.6.788
76	1.5	99.9	.43.51	.722	.673 27.325	14.028	15.371	1.6.788
77	1.5	99.9	.42.96	.722	.605 27.825	14.528	15.371	1.6.788
78	1.5	99.9	.42.51	.722	.673 28.325	14.028	15.371	1.6.788
79	1.5	99.9	.41.96	.722	.605 28.825	14.528	15.371	1.6.788
80	1.5	99.9	.41.51	.722	.673 29.325	14.028	15.371	1.6.788
81	1.5	99.9	.40.96	.722	.605 29.825	14.528	15.371	1.6.788
82	1.5	99.9	.40.51	.722	.673 30.325	14.028	15.371	1.6.788
83	1.5	99.9	.39.96	.722	.605 30.825	14.528	15.371	1.6.788
84	1.5	99.9	.39.51	.722	.673 31.325	14.028	15.371	1.6.788
85	1.5	99.9	.38.96	.722	.605 31.825	14.528	15.371	1.6.788
86	1.5	99.9	.38.51	.722	.673 32.325	14.028	15.371	1.6.788
87	1.5	99.9	.37.96	.722	.605 32.825	14.528	15.371	1.6.788
88	1.5	99.9	.37.51	.722	.673 33.325	14.028	15.371	1.6.788
89	1.5	99.9	.36.96	.722	.605 33.825	14.528	15.371	1.6.788
90	1.5	99.9	.36.51	.722	.673 34.325	14.028	15.371	1.6.788
91	1.5	99.9	.35.96	.722	.605 34.825	14.528	15.371	1.6.788
92	1.5	99.9	.35.51	.722	.673 35.325	14.028	15.371	1.6.788
93	1.5	99.9	.34.96	.722	.605 35.825	14.528	15.371	1.6.788
94	1.5	99.9	.34.51	.722	.673 36.325	14.028	15.371	1.6.788
95	1.5	99.9	.33.96	.722	.605 36.825	14.528	15.371	1.6.788
96	1.5	99.9	.33.51	.722	.673 37.325	14.028	15.371	1.6.788
97	1.5	99.9	.32.96	.722	.605 37.825	14.528	15.371	1.6.788
98	1.5	99.9	.32.51	.722	.673 38.325	14.028	15.371	1.6.788
99	1.5	99.9	.31.96	.722	.605 38.825	14.528	15.371	1.6.788
100	1.5	99.9	.31.51	.722	.673 39.325	14.028	15.371	1.6.788
101	1.5	99.9	.30.96	.722	.605 39.825	14.528	15.371	1.6.788
102	1.5	99.9	.30.51	.722	.673 40.325	14.028	15.371	1.6.788
103	1.5	99.9	.29.96	.722	.605 40.825	14.528	15.371	1.6.788
104	1.5	99.9	.29.51	.722	.673 41.325	14.028	15.371	1.6.788
105	1.5	99.9	.28.96	.722	.605 41.825	14.528	15.371	1.6.788
106	1.5	99.9	.28.51	.722	.673 42.325	14.028	15.371	1.6.788
107	1.5	99.9	.27.96	.722	.605 42.825	14.528	15.371	1.6.788
108	1.5	99.9	.27.51	.722	.673 43.325	14.028	15.371	1.6.788
109	1.5	99.9	.26.96	.722	.605 43.825	14.528	15.371	1.6.788
110	1.5	99.9	.26.51	.722	.673 44.325	14.028	15.371	1.6.788
111	1.5	99.9	.25.96	.722	.605 44.825	14.528	15.371	1.6.788
112	1.5	99.9	.25.51	.722	.673 45.325	14.028	15.371	1.6.788
113	1.5	99.9	.24.96	.722	.605 45.825	14.528	15.371	1.6.788
114	1.5	99.9	.24.51	.722				

JOE KLD74 TAPE 31569- FILES 138-159, RUNS 9.01-9.02 04/17/79

RUN NO. 9. POINT 4. GRID NO. 4

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUELAVER FUNCTION FROM WALL TO Y+=35
FREE STREAM VELOCITY	100.698	100.698
FREE STREAM TEMPERATURE	69.045	
WALL TEMPERATURE	84.097	
WALL HEAT FLUX	.07825	
FREE STREAM DENSITY	.07517	
KINEMATIC VISCOSITY	.0001625	
DENSITY OF FLUID AT WALL	.07293	
KINEMATIC VISCOSITY OF FLUID AT WALL	.0701713	
WALL/FREE STREAM DENSITY RATIO	.07773	
LOCATION REYNOLDS NUMBER (REX)	627481.50	
INPUT VALUE OF VELOCITY DELTA	.44756	
INPUT VALUE OF TEMPERATURE DELTA	.46730	
CALCULATED DELTA		.72279
DISPLACEMENT THICKNESS (DELSTAR) INPUT	.00000	
MOMENTUM THICKNESS (THETA)	.04019	.04023
ENERGY-DISSIPIATION THICKNESS	.02875	.02896
ENTHALPY THICKNESS	.05197	.05215
SHAPE FACTOR 12 (DELSTAR/THETA)	1.39791	1.78934
SHAPE FACTOR 12 (ENERGY/THETA)	1.80781	1.79997
MOMENTUM THICKNESS REYNOLDS NUMBER	1484.53	1496.62
DISPLACEMENT THICKNESS REYNOLDS NUMBER	2775.26	2377.82
SKIN FRICTION COEFFICIENT	.004243	
FRICITION VELOCITY	4.70763	
LAW OF THE WALL CONSTANT (K)	.41052	
LAW OF THE WALL CONSTANT (C)	5.00000	
WAKE STRENGTH		.05775
CLAUSER'S "DELTA" INTEGRAL	-.73843	-.84273
CLAUSER'S "C" INTEGRAL	4.77699	4.68772
DISPLACEMENT THICKNESS - CONSTANT DENSITY	.03694	.03942
MOMENTUM THICKNESS - CONSTANT DENSITY	.02891	.02915
SHAPE FACTOR 12 - CONSTANT DENSITY	1.27759	1.35144

LOCATION -X- 12.15000

Z = .6 INCHES

Table 65.

JOE KLO74 TAPE 3166R- FILES 1T6-159, RUNS 9.21-9.22 04/17/79

RUN NO. 9. POINT 4. GRID NO. 4

REDUCED PROFILE DATA

Y/ INCHES	U/ FT/SEC	T/ SEC	U/U _E	U-UE	U(U+J)	T(T+J)	Y(Y+J)
124	46.57	78.64	.447	.708	-11.839	9.552	11.764
125	49.53	77.73	.403	.855	-10.626	10.908	14.507
126	51.77	77.36	.514	.478	-10.362	11.606	16.108
127	52.71	76.89	.546	.588	-9.774	12.124	18.394
128	57.15	76.92	.671	.527	-8.471	12.989	20.227
129	62.93	75.54	.624	.543	-8.471	13.571	24.579
130	53.77	75.26	.651	.608	-7.819	13.979	28.715
131	65.77	75.01	.663	.624	-7.462	14.027	29.848
132	67.03	74.91	.673	.639	-6.808	14.672	34.266
133	68.74	74.76	.681	.679	-6.673	14.822	37.057
134	69.77	74.71	.684	.697	-6.578	15.072	50.922
135	70.30	74.63	.673	.698	-6.578	15.229	54.817
136	67.54	74.53	.651	.724	-6.462	15.437	59.956
137	69.54	74.43	.663	.639	-6.026	15.672	64.207
138	71.54	74.33	.711	.638	-5.819	15.927	68.163
139	72.01	74.22	.724	.713	-5.203	16.172	99.716
140	72.51	74.16	.724	.776	-5.203	16.417	115.62
141	73.54	74.06	.724	.779	-4.926	16.657	128.579
142	74.54	73.93	.711	.797	-4.926	16.892	144.158
143	75.54	73.83	.711	.797	-4.926	17.137	161.392
144	77.01	73.62	.724	.797	-4.926	17.381	174.392
145	77.51	73.51	.724	.797	-4.926	17.626	191.116
146	79.31	73.36	.724	.797	-4.926	17.871	207.140
147	80.31	73.21	.724	.797	-4.926	18.116	220.664
148	81.31	73.06	.724	.797	-4.926	18.360	223.6599
149	81.31	72.91	.711	.797	-4.926	18.605	251.589
150	81.31	72.76	.711	.797	-4.926	18.850	252.299
151	81.31	72.61	.711	.797	-4.926	19.095	252.555
152	81.31	72.46	.711	.797	-4.926	19.340	298.777
153	81.31	72.31	.711	.797	-4.926	19.584	337.122
154	81.31	72.16	.711	.797	-4.926	19.828	377.036
155	81.31	72.01	.711	.797	-4.926	20.072	458.447
156	81.31	71.86	.711	.797	-4.926	20.316	496.695
157	81.31	71.71	.711	.797	-4.926	20.560	515.728
158	81.31	71.56	.711	.797	-4.926	20.804	619.719
159	81.31	71.41	.711	.797	-4.926	21.048	698.644
160	81.31	71.26	.711	.797	-4.926	21.292	766.162
161	81.31	71.11	.711	.797	-4.926	21.536	835.089
162	81.31	70.96	.711	.797	-4.926	21.780	973.628
163	81.31	70.81	.711	.797	-4.926	22.024	1082.111
164	81.31	70.66	.711	.797	-4.926	22.268	1190.701
165	81.31	70.51	.711	.797	-4.926	22.512	1296.964
166	81.31	70.36	.711	.797	-4.926	22.756	1386.866
167	81.31	70.21	.711	.797	-4.926	23.000	1445.007
168	81.31	70.06	.711	.797	-4.926	23.244	1501.774
169	81.31	69.91	.711	.797	-4.926	23.488	1561.732
170	81.31	69.76	.711	.797	-4.926	23.732	1621.971
171	81.31	69.61	.711	.797	-4.926	24.076	1687.011
172	81.31	69.46	.711	.797	-4.926	24.320	1752.081
173	81.31	69.31	.711	.797	-4.926	24.564	1817.916
174	81.31	69.16	.711	.797	-4.926	24.808	1882.063
175	81.31	69.01	.711	.797	-4.926	25.052	1947.111
176	81.31	68.86	.711	.797	-4.926	25.296	2012.283
177	81.31	68.71	.711	.797	-4.926	25.540	2077.452
178	81.31	68.56	.711	.797	-4.926	25.784	2142.621
179	81.31	68.41	.711	.797	-4.926	26.028	2207.789
180	81.31	68.26	.711	.797	-4.926	26.272	2272.957
181	81.31	68.11	.711	.797	-4.926	26.516	2338.125
182	81.31	67.96	.711	.797	-4.926	26.760	2403.293
183	81.31	67.81	.711	.797	-4.926	27.004	2468.461
184	81.31	67.66	.711	.797	-4.926	27.248	2533.631
185	81.31	67.51	.711	.797	-4.926	27.492	2608.809
186	81.31	67.36	.711	.797	-4.926	27.736	2684.977
187	81.31	67.21	.711	.797	-4.926	28.080	2760.145
188	81.31	67.06	.711	.797	-4.926	28.324	2835.313
189	81.31	66.91	.711	.797	-4.926	28.568	2910.481
190	81.31	66.76	.711	.797	-4.926	28.812	2985.649
191	81.31	66.61	.711	.797	-4.926	29.056	3060.817
192	81.31	66.46	.711	.797	-4.926	29.300	3135.985
193	81.31	66.31	.711	.797	-4.926	29.544	3211.153
194	81.31	66.16	.711	.797	-4.926	29.788	3286.321
195	81.31	66.01	.711	.797	-4.926	30.032	3361.489
196	81.31	65.86	.711	.797	-4.926	30.276	3437.657
197	81.31	65.71	.711	.797	-4.926	30.520	3512.825
198	81.31	65.56	.711	.797	-4.926	30.764	3588.993
199	81.31	65.41	.711	.797	-4.926	31.008	3664.161
200	81.31	65.26	.711	.797	-4.926	31.252	3740.329
201	81.31	65.11	.711	.797	-4.926	31.496	3816.497
202	81.31	64.96	.711	.797	-4.926	31.740	3892.665
203	81.31	64.81	.711	.797	-4.926	32.084	3968.833
204	81.31	64.66	.711	.797	-4.926	32.328	4044.001
205	81.31	64.51	.711	.797	-4.926	32.572	4120.169
206	81.31	64.36	.711	.797	-4.926	32.816	4196.337
207	81.31	64.21	.711	.797	-4.926	33.060	4272.505
208	81.31	64.06	.711	.797	-4.926	33.304	4348.673
209	81.31	63.91	.711	.797	-4.926	33.548	4424.841
210	81.31	63.76	.711	.797	-4.926	33.792	4500.009
211	81.31	63.61	.711	.797	-4.926	34.036	4576.177
212	81.31	63.46	.711	.797	-4.926	34.280	4652.345
213	81.31	63.31	.711	.797	-4.926	34.524	4728.513
214	81.31	63.16	.711	.797	-4.926	34.768	4804.681
215	81.31	63.01	.711	.797	-4.926	35.012	4880.849
216	81.31	62.86	.711	.797	-4.926	35.256	4956.017
217	81.31	62.71	.711	.797	-4.926	35.500	5032.185
218	81.31	62.56	.711	.797	-4.926	35.744	5108.353
219	81.31	62.41	.711	.797	-4.926	36.088	5184.521
220	81.31	62.26	.711	.797	-4.926	36.332	5260.689
221	81.31	62.11	.711	.797	-4.926	36.576	5336.857
222	81.31	61.96	.711	.797	-4.926	36.820	5412.025
223	81.31	61.81	.711	.797	-4.926	37.064	5488.193
224	81.31	61.66	.711	.797	-4.926	37.308	5564.361
225	81.31	61.51	.711	.797	-4.926	37.552	5640.529
226	81.31	61.36	.711	.797	-4.926	37.796	5716.697
227	81.31	61.21	.711	.797	-4.926	38.040	5792.865
228	81.31	61.06	.711	.797	-4.926	38.284	5868.033
229	81.31	60.91	.711	.797	-4.926	38.528	5944.201
230	81.31	60.76	.711	.797	-4.926	38.772	6020.369
231	81.31	60.61	.711	.797	-4.926	39.016	6096.537
232	81.31	60.46	.711	.797	-4.926	39.260	6172.705
233	81.31	60.31	.711	.797	-4.926	39.504	6248.873
234	81.31	60.16	.711	.797	-4.926	39.748	6325.041
235	81.31	60.01	.711	.797	-4.926	40.000	6401.209
236	81.31	59.86	.711	.797	-4.926	40.244	6477.377
237	81.31	59.71	.711	.797	-4.926	40.488	6553.545
238	81.31	59.56	.711	.797	-4.926	40.732	6629.713
239	81.31	59.41	.711	.797	-4.926	41.000	6705.881
240	81.31	59.26	.711	.797	-4.926	41.244	6782.049
241	81.31	59.11	.711	.797	-4.926	41.488	6858.217
242	81.31	58.96	.711	.797	-4.926	41.732	6934.385
243	81.31	58.81	.711	.797	-4.926	42.000	7010.553
244	81.31	58.66	.711	.797	-4.926	42.244	7086.721
245	81.31	58.51	.711	.797	-4.926	42.488	7162.889
246	81.31	58.36	.711	.797	-4.926	42.732	7239.057
247	81.31	58.21	.711	.797	-4.926	43.000	7315.225
248	81.31	58.06	.711	.797	-4.926	43.244	7391.393
249	81.31	57.91	.711	.797	-4.926	43.488	7467.561
250	81.31	57.76	.711	.797	-4.926	43.732	7543.729
251	81.31	57.61	.711	.797	-4.926	44.000	7619.897
252	81.31	57.46	.711	.797	-4.926	44.244	7695.065
253	81.31	57.31	.711	.797	-4.926	44.488	7771.233
254	81.31	57.16	.711	.797	-4.926	44.732	7847.401
255	81.31	57.01	.711	.797	-4.926	45.000	792

JOB KLD74 TAPE 3166R- FILES 138-159, RUNS 9.01-9.22 04/17/79

RUN NO. 9. POINT 5. GRID NO. 4

SECONDARY LAYER PROPERTIES

STANDARD
INTERPOLATION
TO WALL

SUPERPOSED
FUNCTION FROM
WALL TO Y+3E

FREE STREAM VELOCITY	100.844	100.844
FREE STREAM TEMPERATURE	69.165	
WALL TEMPERATURE	55.497	
WALL HEAT FLUX	.07933	
FREE STREAM DENSITY	.007513	
FREE STREAM KINEMATIC VISCOSITY	.001625	
DENSITY OF FLUID AT WALL	.007267	
KINEMATIC VISCOSITY OF FLUID AT WALL	.001715	
WALL/FREE STREAM DENSITY RATIO	.96095	
LOCATION REYNOLDS NUMBER (REX)	628263.06	
INPUT VALUE OF VELOCITY DELTA	.430000	
INPUT VALUE OF TEMPERATURE DELTA	.460000	
CALCULATED DELTA		.71379
DELTA .09.59 INPUT	.00000	
DISPLACEMENT THICKNESS (DELSTAR)	.03898	.03897
MOMENTUM THICKNESS (THETA)	.02762	.02794
ENERGY-DISSISSION THICKNESS	.04995	.05024
ENTHALPY THICKNESS	.00286	.00287
SHAPE FACTOR 12 (DELSTAR/THETA)	1.41154	1.39515
SHAPE FACTOR 32 (ENERGY/THETA)	1.80851	1.79834
MOMENTUM THICKNESS REYNOLDS NUMBER	1429.05	1484.52
DISPLACEMENT THICKNESS REYNOLDS NUMBER	2015.76	2015.32
SKIN FRICTION COEFFICIENT	.04282	
FRICITION VELOCITY	.73850	
LAW OF THE WALL CONSTANT (K)	.41007	
LAW OF THE WALL CONSTANT (C)	5.06000	
WAKE STRENGTH		.04696
CLAUSER'S "DELTA" INTEGRAL	-.69372	-.01112
CLAUSER'S "G" INTEGRAL	4.68346	4.52875
DISPLACEMENT THICKNESS - CONSTANT DENSITY	.03536	.03811
MOMENTUM THICKNESS - CONSTANT DENSITY	.02775	.02911
SHAPE FACTOR 12 - CONSTANT DENSITY	1.27259	1.35562

LOCATION -X- 12.15737

Z = -6 INCHES

Table 66.

JOE KLOTH TAPE 3166R- FILES 136-159, PUNS 9.01-9.22 04/10/79

RUN NO. ° POINT S. GRID NO. 4

REDUCED PPCFILE DATA

	U	T	U	U-UE	U	T	U
	FT/CSC	DEG.F	U/UF	UTAU	(+)	227	12.720
Y	DELLTA	FT/CSC	DEG.F	U/UF	UTAU	T (+)	Y (+)
INCHES	58.52	78.63	421	-11.0265	17.0229	7.227	12.720
•	51.44	77.00	458	-10.4277	17.0267	7.876	15.771
•	56.45	77.01	517	-9.3344	17.0566	8.439	16.072
•	60.47	76.19	561	-8.1344	17.0566	8.887	18.044
•	62.47	75.07	616	-7.568	17.0566	9.446	23.067
•	66.00	75.19	646	-7.0566	17.0566	9.752	25.049
•	66.00	74.63	663	-6.620	17.0566	9.984	25.151
•	66.00	74.17	678	-6.668	17.0566	10.417	32.028
•	66.00	73.01	686	-6.666	17.0566	11.178	37.128
•	66.00	72.07	695	-6.574	17.0566	11.433	41.026
•	66.00	71.01	711	-6.574	17.0566	11.633	46.067
•	66.00	70.91	716	-7.116	17.0566	11.856	53.047
•	66.00	70.47	734	-7.667	17.0566	12.094	57.049
•	66.00	70.09	752	-8.204	17.0566	12.426	63.039
•	66.00	69.50	773	-8.804	17.0566	12.801	68.029
•	66.00	69.07	789	-9.404	17.0566	13.301	74.020
•	66.00	68.67	809	-9.904	17.0566	14.010	79.011
•	66.00	68.25	825	-10.404	17.0566	14.421	84.001
•	66.00	67.85	847	-10.904	17.0566	14.832	89.001
•	66.00	67.47	856	-11.404	17.0566	15.242	93.001
•	66.00	67.07	865	-11.904	17.0566	15.652	97.001
•	66.00	66.67	876	-12.404	17.0566	16.062	101.001
•	66.00	66.27	885	-12.904	17.0566	16.472	105.001
•	66.00	65.87	894	-13.404	17.0566	16.882	109.001
•	66.00	65.47	903	-13.904	17.0566	17.292	113.001
•	66.00	65.07	913	-14.404	17.0566	17.702	117.001
•	66.00	64.67	923	-14.904	17.0566	18.112	121.001
•	66.00	64.27	933	-15.404	17.0566	18.522	125.001
•	66.00	63.87	943	-15.904	17.0566	18.932	129.001
•	66.00	63.47	953	-16.404	17.0566	19.342	133.001
•	66.00	63.07	963	-16.904	17.0566	19.752	137.001
•	66.00	62.67	973	-17.404	17.0566	20.162	141.001
•	66.00	62.27	983	-17.904	17.0566	20.572	145.001
•	66.00	61.87	993	-18.404	17.0566	20.982	149.001
•	66.00	61.47	994	-18.904	17.0566	21.392	153.001
•	66.00	61.07	995	-19.404	17.0566	21.802	157.001
•	66.00	60.67	996	-19.904	17.0566	22.212	161.001
•	66.00	60.27	997	-20.404	17.0566	22.622	165.001
•	66.00	59.87	998	-20.904	17.0566	23.032	169.001
•	66.00	59.47	999	-21.404	17.0566	23.442	173.001
•	66.00	59.07	999	-21.904	17.0566	23.852	177.001
•	66.00	58.67	999	-22.404	17.0566	24.262	181.001
•	66.00	58.27	999	-22.904	17.0566	24.672	185.001
•	66.00	57.87	999	-23.404	17.0566	25.082	189.001
•	66.00	57.47	999	-23.904	17.0566	25.492	193.001
•	66.00	57.07	999	-24.404	17.0566	25.902	197.001
•	66.00	56.67	999	-24.904	17.0566	26.312	201.001
•	66.00	56.27	999	-25.404	17.0566	26.722	205.001
•	66.00	55.87	999	-25.904	17.0566	27.132	209.001
•	66.00	55.47	999	-26.404	17.0566	27.542	213.001
•	66.00	55.07	999	-26.904	17.0566	27.952	217.001
•	66.00	54.67	999	-27.404	17.0566	28.362	221.001
•	66.00	54.27	999	-27.904	17.0566	28.772	225.001
•	66.00	53.87	999	-28.404	17.0566	29.182	229.001
•	66.00	53.47	999	-28.904	17.0566	29.592	233.001
•	66.00	53.07	999	-29.404	17.0566	30.002	237.001
•	66.00	52.67	999	-29.904	17.0566	30.412	241.001
•	66.00	52.27	999	-30.404	17.0566	30.822	245.001
•	66.00	51.87	999	-30.904	17.0566	31.232	249.001
•	66.00	51.47	999	-31.404	17.0566	31.642	253.001
•	66.00	51.07	999	-31.904	17.0566	32.052	257.001
•	66.00	50.67	999	-32.404	17.0566	32.462	261.001
•	66.00	50.27	999	-32.904	17.0566	32.872	265.001
•	66.00	49.87	999	-33.404	17.0566	33.282	269.001
•	66.00	49.47	999	-33.904	17.0566	33.692	273.001
•	66.00	49.07	999	-34.404	17.0566	34.102	277.001
•	66.00	48.67	999	-34.904	17.0566	34.512	281.001
•	66.00	48.27	999	-35.404	17.0566	34.922	285.001
•	66.00	47.87	999	-35.904	17.0566	35.332	289.001
•	66.00	47.47	999	-36.404	17.0566	35.742	293.001
•	66.00	47.07	999	-36.904	17.0566	36.152	297.001
•	66.00	46.67	999	-37.404	17.0566	36.562	301.001
•	66.00	46.27	999	-37.904	17.0566	36.972	305.001
•	66.00	45.87	999	-38.404	17.0566	37.382	309.001
•	66.00	45.47	999	-38.904	17.0566	37.792	313.001
•	66.00	45.07	999	-39.404	17.0566	38.202	317.001
•	66.00	44.67	999	-39.904	17.0566	38.612	321.001
•	66.00	44.27	999	-40.404	17.0566	39.022	325.001
•	66.00	43.87	999	-40.904	17.0566	39.432	329.001
•	66.00	43.47	999	-41.404	17.0566	39.842	333.001
•	66.00	43.07	999	-41.904	17.0566	40.252	337.001
•	66.00	42.67	999	-42.404	17.0566	40.662	341.001
•	66.00	42.27	999	-42.904	17.0566	41.072	345.001
•	66.00	41.87	999	-43.404	17.0566	41.482	349.001
•	66.00	41.47	999	-43.904	17.0566	41.892	353.001
•	66.00	41.07	999	-44.404	17.0566	42.302	357.001
•	66.00	40.67	999	-44.904	17.0566	42.712	361.001
•	66.00	40.27	999	-45.404	17.0566	43.122	365.001
•	66.00	39.87	999	-45.904	17.0566	43.532	369.001
•	66.00	39.47	999	-46.404	17.0566	43.942	373.001
•	66.00	39.07	999	-46.904	17.0566	44.352	377.001
•	66.00	38.67	999	-47.404	17.0566	44.762	381.001
•	66.00	38.27	999	-47.904	17.0566	45.172	385.001
•	66.00	37.87	999	-48.404	17.0566	45.582	389.001
•	66.00	37.47	999	-48.904	17.0566	45.992	393.001
•	66.00	37.07	999	-49.404	17.0566	46.402	397.001
•	66.00	36.67	999	-49.904	17.0566	46.812	401.001
•	66.00	36.27	999	-50.404	17.0566	47.222	405.001
•	66.00	35.87	999	-50.904	17.0566	47.632	409.001
•	66.00	35.47	999	-51.404	17.0566	48.042	413.001
•	66.00	35.07	999	-51.904	17.0566	48.452	417.001
•	66.00	34.67	999	-52.404	17.0566	48.862	421.001
•	66.00	34.27	999	-52.904	17.0566	49.272	425.001
•	66.00	33.87	999	-53.404	17.0566	49.682	429.001
•	66.00	33.47	999	-53.904	17.0566	50.092	433.001
•	66.00	33.07	999	-54.404	17.0566	50.502	437.001
•	66.00	32.67	999	-54.904	17.0566	50.912	441.001
•	66.00	32.27	999	-55.404	17.0566	51.322	445.001
•	66.00	31.87	999	-55.904	17.0566	51.732	449.001
•	66.00	31.47	999	-56.404	17.0566	52.142	453.001
•	66.00	31.07	999	-56.904	17.0566	52.552	457.001
•	66.00	30.67	999	-57.404	17.0566	52.962	461.001
•	66.00	30.27	999	-57.904	17.0566	53.372	465.001
•	66.00	29.87	999	-58.404	17.0566	53.782	469.001
•	66.00	29.47	999	-58.904	17.0566	54.192	473.001
•	66.00	29.07	999	-59.404	17.0566	54.602	477.001
•	66.00	28.67	999	-59.904	17.0566	55.012	481.001
•	66.00	28.27	999	-60.404	17.0566	55.422	485.001
•	66.00	27.87	999	-60.904	17.0566	55.832	489.001
•	66.00	27.47	999	-61.404	17.0566	56.242	493.001
•	66.00	27.07	999	-61.904	17.0566	56.652	497.001
•	66.00	26.67	999	-62.404	17.0566	57.062	501.001
•	66.00	26.27	999	-62.904	17.0566	57.472	505.001
•	66.00	25.87	999	-63.404	17.0566	57.882	509.001
•	66.00	25.47	999	-63.904	17.0566	58.292	513.001
•	66.00	25.07	999	-64			

JCE KLD74 TAPE 3166R- FILES 138-159, RUNS 9.71-9.72 04/17/79

RUN NO. 6. POTNT 6. GRID NO. 4

BOUNDARY LAYER PROPERTIES

	LINPAP INTERPOLATION TO WALL	STANDARD SUBLAYERED FUNCTION FROM WALL TO Y+ = 75
FREE STREAM VELOCITY =	100.355	100.355
FREE STREAM TEMPERATURE =	68.077	
WALL TEMPERATURE =	86.132	
WALL HEAT FLUX =	0.7877	
FREE STREAM KINETIC VISCOSITY =	0.7516	
DENSITY OF FLUID AT WALL =	0.001524	
KINETIC VISCOSITY OF FLUID AT WALL =	0.7276	
WALL/FREE STREAM DENSITY RATIO =	0.001719	
LOCATION REYNOLDS NUMBER (REX) =	0.96829	
INPUT VALUE OF VELOCITY DELTA =	1035617.92	
INPUT VALUE OF TEMPERATURE DELTA =	0.62700	
CALCULATED DELTA =		0.44668
DISPLACEMENT THICKNESS (DELSTAR) =	0.22017	
MOMENTUM THICKNESS (THETA) =	0.0514	0.75E11
ENERGY-DISSIPATION THICKNESS =	0.3967	0.39993
ENTHALPY THICKNESS =	0.07169	0.7193
SHAPE FACTOR 12 (DELSTAR/THETA) =	0.00142	0.00142
SHAPE FACTOR 72 (ENFFGY/THETA) =	1.35999	1.78012
MOMENTUM THICKNESS REYNOLDS NUMBER =	1.20745	1.80133
DISPLACEMENT THICKNESS REYNOLDS NUMBER =	2.04271	2.056071
SKIN FRICTION COEFFICIENT =	2.63934	2.83706
FRICTION VELOCITY =	0.07904	
LAW OF THE WALL CONSTANT (K) =	4.50576	
LAW OF THE WALL CONSTANT (C) =	4.17700	
WAKE STRENGTH =	0.00000	0.99937
CLAUSERS "DELTA" INTEGRAL =	-1.07564	-1.19E86
CLAUSERS "C" INTEGRAL =	6.84279	6.69158
DISPLACEMENT THICKNESS - CONSTANT DENSITY =	0.05101	0.5760
MOMENTUM THICKNESS - CONSTANT DENSITY =	0.03993	0.4222
SHAPE FACTOR 12 - CONSTANT DENSITY =	1.27746	1.73557

LOCATION -X- 20.11000

Z = CENTERLINE

Table 67.

JPE KLOTH TAPE 3166F - FILES 176-159, RUNS 9.01-9.72 04/10/79

RUN NO. 9. POINT 6. GRID NO. 4

REDUCED PROFILE DATA

Y/	U	V	W	U/UF	THETA	UTAU	U+U	T(+)	Y(+)
51	0.796	0.645	0.796	0.795	-12.574	9.699	6.663	11.961	
52	0.795	0.645	0.796	0.795	-11.857	10.416	7.374	14.246	
53	0.795	0.645	0.796	0.795	-10.670	11.272	8.051	17.541	
54	0.795	0.645	0.796	0.795	-9.671	12.640	8.873	20.599	
55	0.795	0.645	0.796	0.795	-8.672	13.248	9.367	23.701	
56	0.795	0.645	0.796	0.795	-7.673	13.648	9.712	26.033	
57	0.795	0.645	0.796	0.795	-6.674	14.046	10.132	31.066	
58	0.795	0.645	0.796	0.795	-5.675	14.452	10.554	35.452	
59	0.795	0.645	0.796	0.795	-4.676	14.859	11.071	39.653	
60	0.795	0.645	0.796	0.795	-3.677	15.267	11.590	42.775	
61	0.795	0.645	0.796	0.795	-2.678	15.674	12.101	46.774	
62	0.795	0.645	0.796	0.795	-1.679	16.082	12.610	50.961	
63	0.795	0.645	0.796	0.795	-0.680	16.490	13.120	55.737	
64	0.795	0.645	0.796	0.795	0.681	16.898	13.530	59.744	
65	0.795	0.645	0.796	0.795	1.682	17.306	14.040	73.724	
66	0.795	0.645	0.796	0.795	2.683	17.714	14.549	88.714	
67	0.795	0.645	0.796	0.795	3.684	18.122	15.057	103.405	
68	0.795	0.645	0.796	0.795	4.685	18.530	15.567	116.493	
69	0.795	0.645	0.796	0.795	5.686	18.938	16.076	131.787	
70	0.795	0.645	0.796	0.795	6.687	19.346	16.585	146.955	
71	0.795	0.645	0.796	0.795	7.688	19.754	17.093	161.309	
72	0.795	0.645	0.796	0.795	8.689	20.162	17.570	175.580	
73	0.795	0.645	0.796	0.795	9.690	20.569	18.058	190.080	
74	0.795	0.645	0.796	0.795	10.691	20.977	18.537	213.231	
75	0.795	0.645	0.796	0.795	11.692	21.385	19.016	224.737	
76	0.795	0.645	0.796	0.795	12.693	21.793	19.495	234.837	
77	0.795	0.645	0.796	0.795	13.694	22.199	19.974	247.937	
78	0.795	0.645	0.796	0.795	14.695	22.597	20.453	262.946	
79	0.795	0.645	0.796	0.795	15.696	22.995	20.932	278.136	
80	0.795	0.645	0.796	0.795	16.697	23.393	21.411	293.034	
81	0.795	0.645	0.796	0.795	17.698	23.791	21.890	315.261	
82	0.795	0.645	0.796	0.795	18.699	24.189	22.369	331.301	
83	0.795	0.645	0.796	0.795	19.699	24.587	22.848	347.406	
84	0.795	0.645	0.796	0.795	20.699	24.985	23.327	362.506	
85	0.795	0.645	0.796	0.795	21.699	25.383	23.806	378.605	
86	0.795	0.645	0.796	0.795	22.699	25.781	24.285	393.704	
87	0.795	0.645	0.796	0.795	23.699	26.179	24.764	408.793	
88	0.795	0.645	0.796	0.795	24.699	26.577	25.243	422.892	
89	0.795	0.645	0.796	0.795	25.699	26.975	25.722	437.991	
90	0.795	0.645	0.796	0.795	26.699	27.373	26.199	452.090	
91	0.795	0.645	0.796	0.795	27.699	27.771	26.678	467.189	
92	0.795	0.645	0.796	0.795	28.699	28.169	27.157	482.288	
93	0.795	0.645	0.796	0.795	29.699	28.567	27.636	497.387	
94	0.795	0.645	0.796	0.795	30.699	28.965	28.115	512.486	
95	0.795	0.645	0.796	0.795	31.699	29.363	28.594	527.585	
96	0.795	0.645	0.796	0.795	32.699	29.761	29.073	542.684	
97	0.795	0.645	0.796	0.795	33.699	30.159	29.552	557.783	
98	0.795	0.645	0.796	0.795	34.699	30.557	30.031	572.882	
99	0.795	0.645	0.796	0.795	35.699	30.955	30.509	587.981	
100	0.795	0.645	0.796	0.795	36.699	31.353	30.988	602.080	
101	0.795	0.645	0.796	0.795	37.699	31.751	31.467	617.179	
102	0.795	0.645	0.796	0.795	38.699	32.149	31.946	632.278	
103	0.795	0.645	0.796	0.795	39.699	32.547	32.425	647.377	
104	0.795	0.645	0.796	0.795	40.699	32.945	32.904	662.476	
105	0.795	0.645	0.796	0.795	41.699	33.343	33.383	677.575	
106	0.795	0.645	0.796	0.795	42.699	33.741	33.862	692.674	
107	0.795	0.645	0.796	0.795	43.699	34.139	34.341	707.773	
108	0.795	0.645	0.796	0.795	44.699	34.537	34.820	722.872	
109	0.795	0.645	0.796	0.795	45.699	34.935	35.299	737.971	
110	0.795	0.645	0.796	0.795	46.699	35.333	35.778	752.070	
111	0.795	0.645	0.796	0.795	47.699	35.731	36.257	767.169	
112	0.795	0.645	0.796	0.795	48.699	36.129	36.736	782.268	
113	0.795	0.645	0.796	0.795	49.699	36.527	37.215	797.367	
114	0.795	0.645	0.796	0.795	50.699	36.925	37.694	812.466	
115	0.795	0.645	0.796	0.795	51.699	37.323	38.173	827.565	
116	0.795	0.645	0.796	0.795	52.699	37.721	38.652	842.664	
117	0.795	0.645	0.796	0.795	53.699	38.119	39.131	857.763	
118	0.795	0.645	0.796	0.795	54.699	38.517	39.610	872.862	
119	0.795	0.645	0.796	0.795	55.699	38.915	40.089	887.961	
120	0.795	0.645	0.796	0.795	56.699	39.313	40.568	903.060	
121	0.795	0.645	0.796	0.795	57.699	39.711	41.047	918.159	
122	0.795	0.645	0.796	0.795	58.699	40.109	41.526	933.258	
123	0.795	0.645	0.796	0.795	59.699	40.507	41.995	948.357	
124	0.795	0.645	0.796	0.795	60.699	40.905	42.474	963.456	
125	0.795	0.645	0.796	0.795	61.699	41.303	42.953	978.555	
126	0.795	0.645	0.796	0.795	62.699	41.699	43.432	993.654	
127	0.795	0.645	0.796	0.795	63.699	42.097	43.911	1008.753	
128	0.795	0.645	0.796	0.795	64.699	42.495	44.390	1023.852	
129	0.795	0.645	0.796	0.795	65.699	42.893	44.869	1038.951	
130	0.795	0.645	0.796	0.795	66.699	43.291	45.348	1054.050	
131	0.795	0.645	0.796	0.795	67.699	43.689	45.827	1069.149	
132	0.795	0.645	0.796	0.795	68.699	44.087	46.306	1084.248	
133	0.795	0.645	0.796	0.795	69.699	44.485	46.785	1099.347	
134	0.795	0.645	0.796	0.795	70.699	44.883	47.264	1114.446	
135	0.795	0.645	0.796	0.795	71.699	45.281	47.743	1129.545	
136	0.795	0.645	0.796	0.795	72.699	45.679	48.222	1144.644	
137	0.795	0.645	0.796	0.795	73.699	46.077	48.699	1159.743	
138	0.795	0.645	0.796	0.795	74.699	46.475	49.178	1174.842	
139	0.795	0.645	0.796	0.795	75.699	46.873	49.657	1189.941	
140	0.795	0.645	0.796	0.795	76.699	47.271	50.136	1205.040	
141	0.795	0.645	0.796	0.795	77.699	47.669	50.615	1220.139	
142	0.795	0.645	0.796	0.795	78.699	48.067	51.094	1235.238	
143	0.795	0.645	0.796	0.795	79.699	48.465	51.573	1250.337	
144	0.795	0.645	0.796	0.795	80.699	48.863	52.052	1265.436	
145	0.795	0.645	0.796	0.795	81.699	49.261	52.531	1280.535	
146	0.795	0.645	0.796	0.795	82.699	49.659	52.999	1295.634	
147	0.795	0.645	0.796	0.795	83.699	50.057	53.478	1310.733	
148	0.795	0.645	0.796	0.795	84.699	50.455	53.957	1325.832	
149	0.795	0.645	0.796	0.795	85.699	50.853	54.436	1340.931	
150	0.795	0.645	0.796	0.795	86.699	51.251	54.915	1356.030	
151	0.795	0.645	0.796	0.795	87.699	51.649	55.394	1371.129	
152	0.795	0.645	0.796	0.795	88.699	52.047	55.873	1386.228	
153	0.795	0.645	0.796	0.795	89.699	52.445	56.352	1401.327	
154	0.795	0.645	0.796	0.795	90.699	52.843	56.831	1416.426	
155	0.795	0.645	0.796	0.795	91.699	53.241	57.310	1431.525	
156	0.795	0.645	0.796	0.795	92.699	53.639	57.789	1446.624	
157	0.795	0.645	0.796	0.795	93.699	54.037	58.268		

JOB KLD74 TAPE 3166F- FILES 176-159, RUNS 9.01-9.22 04/17/79

RUN NO. 9.01 POINT 7. GRID NO. 4

BOUNDARY LAYER PROPERTIES

		LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO $Y+=35$
FREE STREAM VELOCITY	=	100.592	100.592
FREE STREAM TEMPERATURE	=	69.193	
WALL TEMPERATURE	=	87.767	
WALL HEAT FLUX	=	.27062	
FREE STREAM DENSITY	=	.67511	
FREE STREAM KINEMATIC VISCOSITY	=	.0001626	
DENSITY OF FLUID AT WALL	=	.07257	
KINEMATIC VISCOSITY OF FLUID AT WALL	=	.0001728	
WALL/FREE STREAM DENSITY RATIO	=	.96670	
LOCATION REYNOLDS NUMBER (REX)	=	1442266.47	
INPUT VALUE OF VELOCITY DELTA	=	.81000	
INPUT VALUE OF TEMPERATURE DELTA	=	.90000	
CALCULATED DELTA	=		.61162
DELTA .52 INPUT	=	.50000	
DISPLACEMENT THICKNESS (DELSTAR)	=	.07443	.07426
MOMENTUM THICKNESS (THETAA)	=	.05419	.05459
ENERGY-DISSIPATION THICKNESS	=	.09823	.09856
ENTHALPY THICKNESS	=	.00199	.00222
SHAPE FACTOR 12 (DELSTAR/THETA)	=	1.37357	1.36052
SHAPE FACTOR .72 (ENERGY/THETA)	=	1.81355	1.80757
MOMENTUM THICKNESS REYNOLDS NUMBER	=	.7794.32	.7814.42
DISPLACEMENT THICKNESS REYNOLDS NUMBER	=	.7836.12	.7829.07
SKIN FRICTION COEFFICIENT	=	.003625	
FRICITION VELOCITY	=	4.35712	
LAW OF THE WALL CONSTANT (K)	=	.41035	
LAW OF THE WALL CONSTANT (C)	=	5.00000	
WAKE STRENGTH	=		.12849
CLAUSERS "DELTA" INTEGRAL	=	-1.51253	-1.66810
CLAUSERS "C" INTEGRAL	=	9.53658	9.22212
DISPLACEMENT THICKNESS - CONSTANT DENSITY	=	.26898	.27226
MOMENTUM THICKNESS - CONSTANT DENSITY	=	.25455	.25495
SHAPE FACTOR 12 - CONSTANT DENSITY	=	1.26446	1.71484

LOCATION -X- 28.10371

Z = CENTERLINE

Table 68.

JOE KLD74 TAPE 3166R- FILES 13P-159, RUNS 9.01-9.22 04/10/79

RUN NO. 9. POINT 7. GRID NO. 4

REDUCED PROFILE DATA

Table 68.

JOB KLD74 TAPE 316ER- FILES 138-159, RUNS 9.01-9.22 04/17/79

RUN NO. 0. POINT 8. GRID NO. 4

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO Y+RE
FREE STREAM VELOCITY	100.016	100.016
FREE STREAM TEMPERATURE	60.036	
WALL TEMPERATURE	86.192	
WALL HEAT FLUX	.07927	
FREE STREAM DENSITY	.07512	
FREE STREAM KINEMATIC VISCOSITY	.0001635	
DENSITY OF FLUID AT WALL	.0007251	
KINEMATIC VISCOSITY OF FLUID AT WALL	.0001735	
WALL/FREE STREAM DENSITY RATIO	.96522	
LOCATION REYNOLDS NUMBER (REX)	1442397.33	
INPUT VALUE OF VELOCITY DELTA	1.00000	
INPUT VALUE OF TEMPERATURE DELTA	1.02100	
CALCULATED DELTA		.69516
DELTA 29.5% INPUT	.00000	
DISPLACEMENT THICKNESS (DELSTAR)	.08113	.08121
MOMENTUM THICKNESS (THETA)	.06010	.06025
ENERGY-DISSIPATION THICKNESS	.10920	.10937
ENTHALPY THICKNESS	.00233	.00234
SHAPE FACTOR 12 (DELSTAR/THETA)	1.34991	1.34796
SHAPE FACTOR 12 (ENERGY/THETA)	1.081701	1.081415
MOMENTUM THICKNESS REYNOLDS NUMBER	3584.97	3592.47
DISPLACEMENT THICKNESS REYNOLDS NUMBER	4164.43	4168.51
SKIN FRICTION COEFFICIENT	.003537	
FRICITION VELOCITY	.071560	
LAW OF THE WALL CONSTANT (K)	.41000	
LAW OF THE WALL CONSTANT (C)	5.00000	
WAKE STRENGTH		.09265
CLAUSER'S "DELTA" INTEGRAL	-1.72756	-1.83244
CLAUSER'S "C" INTEGRAL	9.86577	9.82526
DISPLACEMENT THICKNESS - CONSTANT DENSITY	.57656	.57891
MOMENTUM THICKNESS - CONSTANT DENSITY	.06750	.06762
SHAPE FACTOR 12 - CONSTANT DENSITY	1.26561	1.20125

LOCATION -Y- 26.10721

Z = +6 INCHES

Table 69.

JOE KLD74 TAPE 31560- FILES 13E-159, RUNS 9.71-9.72 04/17/70
RUN NO. 9. POINT B. GRID NO. 4
REFINED GEOTEXT DATA

REDUCED PROFILE DATA

Table 69.

JOE KLD74 TAPE 3166R- FILES 173-159, RUNS 9.01-9.22 04/10/79

RUN NO. 9. POINT 10. GRID NO. 4

BOUNDARY LAYER PROPERTIES

		LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO $Y+ = 35$
FREE STREAM VELOCITY	=	100.772	100.772
FREE STREAM TEMPERATURE	=	68.155	
WALL TEMPERATURE	=	88.070	
WALL HEAT FLUX	=	57722	
FREE STREAM DENSITY	=	0.27466	
FREE STREAM KINEMATIC VISCOSITY	=	0.0001633	
DENSITY OF FLUID AT WALL	=	0.00017194	
KINEMATIC VISCOSITY OF FLUID AT WALL	=	0.0001744	
WALL/FREE STREAM DENSITY RATIO	=	0.6764	
LOCATION REYNOLDS NUMBER (REX)	=	1856334.57	
INPUT VALUE OF VELOCITY DELTA	=	1.71030	
INPUT VALUE OF TEMPERATURE DELTA	=	1.65030	
CALCULATED DELTA	=		.78713
DELTA 29.5% INPUT	=	0.00030	
DISPLACEMENT THICKNESS (DELSTAR)	=	0.9276	0.9275
MOMENTUM THICKNESS (THETA)	=	0.6652	0.6673
ENERGY-DISSIPATION THICKNESS	=	0.12440	0.12457
ENTHALPY THICKNESS	=	0.00279	0.00297
SHAPE FACTOR 12 (DELSTAR/THETA)	=	1.35377	1.34964
SHAPE FACTOR 72 (ENFFEGY/THETA)	=	1.81560	1.81257
MOMENTUM THICKNESS REYNOLDS NUMBER	=	3523.29	3534.56
DISPLACEMENT THICKNESS REYNOLDS NUMBER	=	4769.77	4769.71
SKIN FRICTION COEFFICIENT	=	0.03453	
FRICTION VELOCITY	=	0.26528	
LAW OF THE WALL CONSTANT (K)	=	0.41000	
LAW OF THE WALL CONSTANT (C)	=	5.00000	
WAKE STRENGTH	=		.13767
CLAUSIERS "DELTA" INTEGRAL	=	-2.00285	-2.12634
CLAUSIERS "C" INTEGRAL	=	11.72400	11.66257
DISPLACEMENT THICKNESS - CONSTANT DENSITY	=	0.98779	0.99557
MOMENTUM THICKNESS - CONSTANT DENSITY	=	0.56950	0.56922
SHAPE FACTOR 12 - CONSTANT DENSITY	=	1.26650	1.30025

LOCATION -Y- 36.10761

Z = CENTERLINE

Table 70.

JOB KLO74 TAPE 3156R- FILES 135-159, RUNS 9.21-9.22 04/17/79

RUN NO. 0. POINT 10. GRID NO. 4

REDUCED PROFILE DATA

V/	U	T	U/UF	UTAU	U(0)	T(0)	V(0)
37.	87.0	87.9	373.	875.	8.610	7.078	10.665
7.	87.1	87.0	374.	876.	7.073	7.073	12.695
7.	87.2	87.1	375.	877.	8.616	7.079	12.651
7.	87.3	87.0	376.	878.	8.617	7.079	12.617
7.	87.4	87.1	377.	879.	8.618	7.079	12.584
7.	87.5	87.0	378.	880.	8.619	7.079	12.551
7.	87.6	87.1	379.	881.	8.620	7.079	12.517
7.	87.7	87.0	380.	882.	8.621	7.079	12.484
7.	87.8	87.1	381.	883.	8.622	7.079	12.451
7.	87.9	87.0	382.	884.	8.623	7.079	12.417
7.	88.0	87.1	383.	885.	8.624	7.079	12.384
7.	88.1	87.0	384.	886.	8.625	7.079	12.351
7.	88.2	87.1	385.	887.	8.626	7.079	12.317
7.	88.3	87.0	386.	888.	8.627	7.079	12.284
7.	88.4	87.1	387.	889.	8.628	7.079	12.251
7.	88.5	87.0	388.	890.	8.629	7.079	12.217
7.	88.6	87.1	389.	891.	8.630	7.079	12.184
7.	88.7	87.0	390.	892.	8.631	7.079	12.151
7.	88.8	87.1	391.	893.	8.632	7.079	12.117
7.	88.9	87.0	392.	894.	8.633	7.079	12.084
7.	89.0	87.1	393.	895.	8.634	7.079	12.051
7.	89.1	87.0	394.	896.	8.635	7.079	12.017
7.	89.2	87.1	395.	897.	8.636	7.079	11.984
7.	89.3	87.0	396.	898.	8.637	7.079	11.951
7.	89.4	87.1	397.	899.	8.638	7.079	11.917
7.	89.5	87.0	398.	900.	8.639	7.079	11.884
7.	89.6	87.1	399.	901.	8.640	7.079	11.851
7.	89.7	87.0	400.	902.	8.641	7.079	11.817
7.	89.8	87.1	401.	903.	8.642	7.079	11.784
7.	89.9	87.0	402.	904.	8.643	7.079	11.751
7.	90.0	87.1	403.	905.	8.644	7.079	11.717
7.	90.1	87.0	404.	906.	8.645	7.079	11.684
7.	90.2	87.1	405.	907.	8.646	7.079	11.651
7.	90.3	87.0	406.	908.	8.647	7.079	11.617
7.	90.4	87.1	407.	909.	8.648	7.079	11.584
7.	90.5	87.0	408.	910.	8.649	7.079	11.551
7.	90.6	87.1	409.	911.	8.650	7.079	11.517
7.	90.7	87.0	410.	912.	8.651	7.079	11.484
7.	90.8	87.1	411.	913.	8.652	7.079	11.451
7.	90.9	87.0	412.	914.	8.653	7.079	11.417
7.	91.0	87.1	413.	915.	8.654	7.079	11.384
7.	91.1	87.0	414.	916.	8.655	7.079	11.351
7.	91.2	87.1	415.	917.	8.656	7.079	11.317
7.	91.3	87.0	416.	918.	8.657	7.079	11.284
7.	91.4	87.1	417.	919.	8.658	7.079	11.251
7.	91.5	87.0	418.	920.	8.659	7.079	11.217
7.	91.6	87.1	419.	921.	8.660	7.079	11.184
7.	91.7	87.0	420.	922.	8.661	7.079	11.151
7.	91.8	87.1	421.	923.	8.662	7.079	11.117
7.	91.9	87.0	422.	924.	8.663	7.079	11.084
7.	92.0	87.1	423.	925.	8.664	7.079	11.051
7.	92.1	87.0	424.	926.	8.665	7.079	11.017
7.	92.2	87.1	425.	927.	8.666	7.079	10.984
7.	92.3	87.0	426.	928.	8.667	7.079	10.951
7.	92.4	87.1	427.	929.	8.668	7.079	10.917
7.	92.5	87.0	428.	930.	8.669	7.079	10.884
7.	92.6	87.1	429.	931.	8.670	7.079	10.851
7.	92.7	87.0	430.	932.	8.671	7.079	10.817
7.	92.8	87.1	431.	933.	8.672	7.079	10.784
7.	92.9	87.0	432.	934.	8.673	7.079	10.751
7.	93.0	87.1	433.	935.	8.674	7.079	10.717
7.	93.1	87.0	434.	936.	8.675	7.079	10.684
7.	93.2	87.1	435.	937.	8.676	7.079	10.651
7.	93.3	87.0	436.	938.	8.677	7.079	10.617
7.	93.4	87.1	437.	939.	8.678	7.079	10.584
7.	93.5	87.0	438.	940.	8.679	7.079	10.551
7.	93.6	87.1	439.	941.	8.680	7.079	10.517
7.	93.7	87.0	440.	942.	8.681	7.079	10.484
7.	93.8	87.1	441.	943.	8.682	7.079	10.451
7.	93.9	87.0	442.	944.	8.683	7.079	10.417
7.	94.0	87.1	443.	945.	8.684	7.079	10.384
7.	94.1	87.0	444.	946.	8.685	7.079	10.351
7.	94.2	87.1	445.	947.	8.686	7.079	10.317
7.	94.3	87.0	446.	948.	8.687	7.079	10.284
7.	94.4	87.1	447.	949.	8.688	7.079	10.251
7.	94.5	87.0	448.	950.	8.689	7.079	10.217
7.	94.6	87.1	449.	951.	8.690	7.079	10.184
7.	94.7	87.0	450.	952.	8.691	7.079	10.151
7.	94.8	87.1	451.	953.	8.692	7.079	10.117
7.	94.9	87.0	452.	954.	8.693	7.079	10.084
7.	95.0	87.1	453.	955.	8.694	7.079	10.051
7.	95.1	87.0	454.	956.	8.695	7.079	10.017
7.	95.2	87.1	455.	957.	8.696	7.079	9.984
7.	95.3	87.0	456.	958.	8.697	7.079	9.951
7.	95.4	87.1	457.	959.	8.698	7.079	9.917
7.	95.5	87.0	458.	960.	8.699	7.079	9.884
7.	95.6	87.1	459.	961.	8.700	7.079	9.851
7.	95.7	87.0	460.	962.	8.701	7.079	9.817
7.	95.8	87.1	461.	963.	8.702	7.079	9.784
7.	95.9	87.0	462.	964.	8.703	7.079	9.751
7.	96.0	87.1	463.	965.	8.704	7.079	9.717
7.	96.1	87.0	464.	966.	8.705	7.079	9.684
7.	96.2	87.1	465.	967.	8.706	7.079	9.651
7.	96.3	87.0	466.	968.	8.707	7.079	9.617
7.	96.4	87.1	467.	969.	8.708	7.079	9.584
7.	96.5	87.0	468.	970.	8.709	7.079	9.551
7.	96.6	87.1	469.	971.	8.710	7.079	9.517
7.	96.7	87.0	470.	972.	8.711	7.079	9.484
7.	96.8	87.1	471.	973.	8.712	7.079	9.451
7.	96.9	87.0	472.	974.	8.713	7.079	9.417
7.	97.0	87.1	473.	975.	8.714	7.079	9.384
7.	97.1	87.0	474.	976.	8.715	7.079	9.351
7.	97.2	87.1	475.	977.	8.716	7.079	9.317
7.	97.3	87.0	476.	978.	8.717	7.079	9.284
7.	97.4	87.1	477.	979.	8.718	7.079	9.251
7.	97.5	87.0	478.	980.	8.719	7.079	9.217
7.	97.6	87.1	479.	981.	8.720	7.079	9.184
7.	97.7	87.0	480.	982.	8.721	7.079	9.151
7.	97.8	87.1	481.	983.	8.722	7.079	9.117
7.	97.9	87.0	482.	984.	8.723	7.079	9.084
7.	98.0	87.1	483.	985.	8.724	7.079	9.051
7.	98.1	87.0	484.	986.	8.725	7.079	9.017
7.	98.2	87.1	485.	987.	8.726	7.079	8.984
7.	98.3	87.0	486.	988.	8.727	7.079	8.951
7.	98.4	87.1	487.	989.	8.728	7.079	8.917
7.	98.5	87.0	488.	990.	8.729	7.079	8.884
7.	98.6	87.1	489.	991.	8.730	7.079	8.851
7.	98.7	87.0	490.	992.	8.731	7.079	8.817
7.	98.8	87.1	491.	993.	8.732	7.079	8.784
7.	98.9	87.0	492.	994.	8.733	7.079	8.751
7.	99.0	87.1	493.	995.	8.734	7.079	8.717
7.	99.1	87.0	494.	996.	8.735	7.079	8.684
7.	99.2	87.1	495.	997.	8.736	7.079	8.651
7.	99.3	87.0	496.	998.	8.737	7.079	8.617
7.	99.4	87.1	497.	999.	8.738	7.079	8.584
7.	99.5	87.0	498.	1000.	8.739	7.079	8.551

Table 70.

JOE KLD74 TAPE 3166R- FILES 13F-159, RUNS 9.01-9.22 04/12/79

RUN NO. 9. POINT 12. GRID NO. 4

BOUNDARY LAYER PROPERTIES

		STANDARD INTERPOLATION TO WALL	SUBLAYER FUNCTION FROM WALL TO $\gamma+75$
FREE STREAM VELOCITY	=	101.363	101.363
FREE STREAM TEMPERATURE	=	69.709	
WALL TEMPERATURE	=	89.740	
WALL HEAT FLUX	=	.27730	
FREE STREAM DENSITY	=	.07453	
FREE STREAM KINEMATIC VISCOSITY	=	.0001638	
DENSITY OF FLUID AT WALL	=	.07172	
KINEMATIC VISCOSITY OF FLUID AT WALL	=	.7731753	
WALL/FREE STREAM DENSITY RATIO	=	.96235	
LOCATION REYNOLDS NUMBER (REX)	=	2279174.937	
INPUT VALUE OF VELOCITY DELTA	=	1.40000	
INPUT VALUE OF TEMPERATURE DELTA	=	1.65000	
CALCULATED DELTA	=		1.03267
DELTA 99.5% INPUT	=	.00000	
DISPLACEMENT THICKNESS (DELSTAR)	=	.11692	.11608
MOMENTUM THICKNESS (THETAS)	=	.08789	.08926
ENERGY-DISSIPATION THICKNESS	=	.16728	.16779
ENTHALPY THICKNESS	=	.30750	.30367
SHAPE FACTOR 12 (DELSTAR/THETA)	=	1.33797	1.32939
SHAPE FACTOR 72 (ENERGY/THETA)	=	1.62346	1.82138
MOMENTUM THICKNESS REYNOLDS NUMBER	=	4531.97	8540.76
DISPLACEMENT THICKNESS REYNOLDS NUMBER	=	6031.94	6071.98
SKIN FRICTION COEFFICIENT	=	.0033333	
FRICTION VELOCITY	=	.41000	
LAW OF THE WALL CONSTANT (K)	=	5.00000	
LAW OF THE WALL CONSTANT (C)	=		.10942
WAKE STRENGTH	=		
CLAUSERS "DELTA" INTEGRAL	=	-2.61522	-2.73992
CLAUSERS "G" INTEGRAL	=	14.54837	14.44136
DISPLACEMENT THICKNESS - CONSTANT DENSITY	=	.11020	.11746
MOMENTUM THICKNESS - CONSTANT DENSITY	=	.08850	.08869
SHAPE FACTOR 12 - CONSTANT DENSITY	=	1.25317	1.27046

LOCATION -Y- 44.20000

Z = +6 INCHES

Table 71.

JOE KLD74 TAPE 3156D- FILES 17A-159, RUNS 9.01-9.02 04/17/79
RUN NO. 9. POINT 12. GRID NO. 4

REDUCED PROFILE DATA

POINT 12

GRID NO. 4

REDUCED PROFILE DATA

Table 71.

JOB KLD74 TAPE 3156R- FILES 138-159, RUNS 9.01-9.02 04/10/79

RUN NO. 9. POINT 14.

GRID NO. 4

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUPLAYER FUNCTION FROM WALL TO Y+ = 75
FREE STREAM VELOCITY	101.298	101.268
FREE STREAM TEMPERATURE	68.579	
WALL TEMPERATURE	90.820	
WALL HEAT FLUX	.57728	
FREE STREAM DENSITY	.0001675	
FREE STREAM KINEMATIC VISCOSITY	.00017171	
DENSITY OF FLUID AT WALL		
KINEMATIC VISCOSITY OF FLUID AT WALL	.0001754	
WALL/FREE STREAM DENSITY RATIO	.000135	
LOCATION REYNOLDS NUMBER (REX)	2696717.06	
INPUT VALUE OF VELOCITY DELTA	1.56000	
INPUT VALUE OF TEMPERATURE DELTA	1.76000	
CALCULATED DELTA		1.12955
DELTA 69.52 INPUT	.00000	
DISPLACEMENT THICKNESS (DELSTAR)	.12679	.12688
MOMENTUM THICKNESS (THETAP)	.09518	.09537
ENERGY-DISSIPATION THICKNESS	.17344	.17351
ENTHALPY THICKNESS	.00411	.00412
SHAPE FACTOR 12 (DELSTAR/THETA)	1.37216	1.73132
SHAPE FACTOR 32 (ENERGY/THETA)	1.82227	1.82267
MOMENTUM THICKNESS REYNOLDS NUMBER	4012.036	4018.073
DISPLACEMENT THICKNESS REYNOLDS NUMBER	6543.82	6548.47
SKIN FRICTION COEFFICIENT	.003245	
FRICTION VELOCITY	4.16784	
LAW OF THE WALL CONSTANT (K)	.81027	
LAW OF THE WALL CONSTANT (C1)	5.00000	
WAKE STRENGTH		.11010
CLAUSER'S "DELTA" INTEGRAL	-2.87622	-2.98541
CLAUSER'S "G" INTEGRAL	15.87627	15.84897
DISPLACEMENT THICKNESS - CONSTANT DENSITY	.17741	.12276
MOMENTUM THICKNESS - CONSTANT DENSITY	.09588	.09622
SHAPE FACTOR 12 - CONSTANT DENSITY	1.25570	1.27955

LOCATION -X- 52.25000

Z = CENTERLINE

Table 72.

JOE KLD74 TAPE 3156P - FILES 132-159, RUNS 9.01-9.22 04/10/79

RUN NO. 0. POINT 14. GRID NO. 4

REDUCED PROFILE DATA

	Y/ INCHES	U/ FT/SEC	T/ DEG/F	U/UF	T/FTA	U-UE UTAU	U(+) U(-)	T(+) T(-)	Y(+)
1	1.000	3.0	87	8.44	-16.203	8.103	6.448	8.957	
2	1.000	3.0	87	8.45	-14.448	8.095	7.117	12.016	
3	1.000	3.0	87	8.46	-13.716	8.050	8.010	14.060	
4	1.000	3.0	87	8.47	-12.033	8.035	8.405	16.067	
5	1.000	3.0	87	8.48	-11.366	8.025	9.099	20.021	
6	1.000	3.0	87	8.49	-10.718	8.015	9.709	25.017	
7	1.000	3.0	87	8.50	-10.033	8.005	10.227	28.029	
8	1.000	3.0	87	8.51	-9.366	8.000	10.727	32.058	
9	1.000	3.0	87	8.52	-8.713	7.995	11.220	35.017	
10	1.000	3.0	87	8.53	-8.066	7.985	11.721	42.006	
11	1.000	3.0	87	8.54	-7.413	7.975	12.220	46.002	
12	1.000	3.0	87	8.55	-6.766	7.965	12.719	50.006	
13	1.000	3.0	87	8.56	-6.119	7.955	13.218	54.002	
14	1.000	3.0	87	8.57	-5.472	7.945	13.717	58.007	
15	1.000	3.0	87	8.58	-4.825	7.935	14.216	62.001	
16	1.000	3.0	87	8.59	-4.178	7.925	14.715	66.006	
17	1.000	3.0	87	8.60	-3.531	7.915	15.214	70.002	
18	1.000	3.0	87	8.61	-2.884	7.905	15.713	74.007	
19	1.000	3.0	87	8.62	-2.237	7.895	16.212	78.003	
20	1.000	3.0	87	8.63	-1.590	7.885	16.711	82.008	
21	1.000	3.0	87	8.64	-1.043	7.875	17.210	86.004	
22	1.000	3.0	87	8.65	-0.396	7.865	17.709	90.009	
23	1.000	3.0	87	8.66	0.253	7.855	18.208	94.005	
24	1.000	3.0	87	8.67	0.806	7.845	18.707	98.001	
25	1.000	3.0	87	8.68	1.359	7.835	19.206	102.007	
26	1.000	3.0	87	8.69	1.912	7.825	19.705	106.003	
27	1.000	3.0	87	8.70	2.465	7.815	20.204	110.009	
28	1.000	3.0	87	8.71	2.918	7.805	20.703	114.005	
29	1.000	3.0	87	8.72	3.471	7.795	21.202	118.001	
30	1.000	3.0	87	8.73	3.924	7.785	21.701	122.007	
31	1.000	3.0	87	8.74	4.377	7.775	22.200	126.003	
32	1.000	3.0	87	8.75	4.830	7.765	22.700	130.009	
33	1.000	3.0	87	8.76	5.283	7.755	23.200	134.005	
34	1.000	3.0	87	8.77	5.736	7.745	23.700	138.001	
35	1.000	3.0	87	8.78	6.189	7.735	24.200	142.007	
36	1.000	3.0	87	8.79	6.642	7.725	24.700	146.003	
37	1.000	3.0	87	8.80	7.095	7.715	25.200	150.009	
38	1.000	3.0	87	8.81	7.548	7.705	25.700	154.005	
39	1.000	3.0	87	8.82	7.901	7.695	26.200	158.001	
40	1.000	3.0	87	8.83	8.354	7.685	26.700	162.007	
41	1.000	3.0	87	8.84	8.807	7.675	27.200	166.003	
42	1.000	3.0	87	8.85	9.260	7.665	27.700	170.009	
43	1.000	3.0	87	8.86	9.713	7.655	28.200	174.005	
44	1.000	3.0	87	8.87	10.166	7.645	28.700	178.001	
45	1.000	3.0	87	8.88	10.619	7.635	29.200	182.007	
46	1.000	3.0	87	8.89	11.072	7.625	29.700	186.003	
47	1.000	3.0	87	8.90	11.525	7.615	30.200	190.009	
48	1.000	3.0	87	8.91	11.978	7.605	30.700	194.005	
49	1.000	3.0	87	8.92	12.431	7.595	31.200	198.001	
50	1.000	3.0	87	8.93	12.884	7.585	31.700	202.007	
51	1.000	3.0	87	8.94	13.337	7.575	32.200	206.003	
52	1.000	3.0	87	8.95	13.790	7.565	32.700	210.009	
53	1.000	3.0	87	8.96	14.243	7.555	33.200	214.005	
54	1.000	3.0	87	8.97	14.696	7.545	33.700	218.001	
55	1.000	3.0	87	8.98	15.149	7.535	34.200	222.007	
56	1.000	3.0	87	8.99	15.602	7.525	34.700	226.003	
57	1.000	3.0	87	9.00	16.055	7.515	35.200	230.009	
58	1.000	3.0	87	9.01	16.508	7.505	35.700	234.005	
59	1.000	3.0	87	9.02	16.961	7.495	36.200	238.001	
60	1.000	3.0	87	9.03	17.414	7.485	36.700	242.007	
61	1.000	3.0	87	9.04	17.867	7.475	37.200	246.003	
62	1.000	3.0	87	9.05	18.320	7.465	37.700	250.009	
63	1.000	3.0	87	9.06	18.773	7.455	38.200	254.005	
64	1.000	3.0	87	9.07	19.226	7.445	38.700	258.001	
65	1.000	3.0	87	9.08	19.679	7.435	39.200	262.007	
66	1.000	3.0	87	9.09	20.132	7.425	39.700	266.003	
67	1.000	3.0	87	9.10	20.585	7.415	40.200	270.009	
68	1.000	3.0	87	9.11	21.038	7.405	40.700	274.005	
69	1.000	3.0	87	9.12	21.491	7.395	41.200	278.001	
70	1.000	3.0	87	9.13	21.944	7.385	41.700	282.007	
71	1.000	3.0	87	9.14	22.397	7.375	42.200	286.003	

Table 72.

JOE KLD74 TAPE 3166P- FILES 138-159, RUNS 9.01-9.22 04/10/79

RUN NO. 9. POINT 16. GRID NO. 4

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO $Y+ = 35$
FREE STREAM VELOCITY =	99.904	99.904
FREE STREAM TEMPERATURE =	69.175	
WALL TEMPERATURE =	91.077	
WALL HEAT FLUX =	.07795	
FREE STREAM DENSITY =	.57497	
FREE STREAM KINEMATIC VISCOSITY =	.0001529	
DENSITY OF FLUID AT WALL =	.57199	
KINEMATIC VISCOSITY OF FLUID AT WALL =	.0001752	
WALL/FREE STREAM DENSITY RATIO =	.96725	
LOCATION REYNOLDS NUMBER (REX) =	376972.282	
INPUT VALUE OF VELOCITY DELTA =	1.90000	
INPUT VALUE OF TEMPERATURE DELTA =	2.15000	
CALCULATED DELTA =		1.72157
DELTA 99.52 INPUT =	.00000	
DISPLACEMENT THICKNESS (DELSTAR) =	.14749	.14761
MOMENTUM THICKNESS (THETA) =	.11197	.11213
ENERGY-DISSIPATION THICKNESS =	.20458	.20465
ENTHALPY THICKNESS =	.000440	.000441
SHAPE FACTOR 12 (DELSTAR/THETA) =	1.31720	1.31642
SHAPE FACTOR 72 (ENFFGY/THETA) =	1.82699	1.82527
MOMENTUM THICKNESS REYNOLDS NUMBER =	.5723.31	.5721.14
DISPLACEMENT THICKNESS REYNOLDS NUMBER =	7538.74	7544.47
SKIN FRICTION COEFFICIENT =	.003143	
FRICTION VELOCITY =	4.04184	
LAW OF THE WALL CONSTANT (K) =	.41000	
LAW OF THE WALL CONSTANT (C) =	5.00000	
WAKE STRENGTH =		.12143
CLAUSERS "DELTA" INTEGRAL =	-7.40000	-3.54001
CLAUSERS "F" INTEGRAL =	18.54854	18.51707
DISPLACEMENT THICKNESS - CONSTANT DENSITY =	.14749	.14722
MOMENTUM THICKNESS - CONSTANT DENSITY =	.11275	.11291
SHAPE FACTOR 12 - CONSTANT DENSITY =	1.24677	1.26843
LOCATION -X- =	60.20000	
Z = +6 INCHES =		

Table 73.

JOB KLD74 TAPE 31662- FILES 13A-159, RUNS 9.01-9.72 04/17/70

RUN NO. 9. POINT 16. GRID NO. 4

REDUCED PROFILE DATA

Y INCHES	U FT/SEC	V FT/SEC	W FT/SEC	U/U _E	U/TAU	U/U _E	U/U _E	T(+)	Y(+)
1123667	36.46	8.7	1.1	36.7	7.71	15.64	9.26	6.499	10.766
112376	39.46	5.7	1.2	39.5	7.62	14.64	7.77	7.292	12.187
112382	47.9	5.7	1.2	43.9	6.94	13.64	7.77	7.932	15.776
112392	47.9	8.1	1.2	47.4	6.35	12.5	7.71	8.577	17.768
112398	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	19.680
112403	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	23.639
112409	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	31.788
112414	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	34.810
112416	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	36.860
112419	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	38.810
112422	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	40.860
112424	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	42.810
112426	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	44.860
112429	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	46.810
112431	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	48.860
112433	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	50.810
112435	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	52.860
112437	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	54.810
112439	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	56.860
112441	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	58.810
112443	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	60.860
112445	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	62.810
112447	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	64.860
112449	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	66.810
112451	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	68.860
112453	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	70.810
112455	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	72.860
112457	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	74.810
112459	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	76.860
112461	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	78.810
112463	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	80.860
112465	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	82.810
112467	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	84.860
112469	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	86.810
112471	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	88.860
112473	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	90.810
112475	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	92.860
112477	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	94.810
112479	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	96.860
112481	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	98.810
112483	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	100.860
112485	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	102.810
112487	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	104.860
112489	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	106.810
112491	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	108.860
112493	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	110.810
112495	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	112.860
112497	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	114.810
112499	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	116.860
112501	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	118.810
112503	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	120.860
112505	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	122.810
112507	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	124.860
112509	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	126.810
112511	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	128.860
112513	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	130.810
112515	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	132.860
112517	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	134.860
112519	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	136.860
112521	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	138.860
112523	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	140.860
112525	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	142.860
112527	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	144.860
112529	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	146.860
112531	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	148.860
112533	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	150.860
112535	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	152.860
112537	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	154.860
112539	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	156.860
112541	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	158.860
112543	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	160.860
112545	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	162.860
112547	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	164.860
112549	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	166.860
112551	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	168.860
112553	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	170.860
112555	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	172.860
112557	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	174.860
112559	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	176.860
112561	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	178.860
112563	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	180.860
112565	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	182.860
112567	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	184.860
112569	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	186.860
112571	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	188.860
112573	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	190.860
112575	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	192.860
112577	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	194.860
112579	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	196.860
112581	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	198.860
112583	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	200.860
112585	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	202.860
112587	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	204.860
112589	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	206.860
112591	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	208.860
112593	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	210.860
112595	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	212.860
112597	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	214.860
112599	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	216.860
112601	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	218.860
112603	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	220.860
112605	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	222.860
112607	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	224.860
112609	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	226.860
112611	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	228.860
112613	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	230.860
112615	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	232.860
112617	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	234.860
112619	47.9	8.1	1.2	47.4	6.59	12.5	7.71	8.920	236.860
112621									

JOB KLD74 TAPE 3166R- FILES 138-159, RUNS 9.01-9.22 04/10/79

RUN NO. 9. POINT 17. GRID NO. 4

BOUNDARY LAYER PROPERTIES

LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO Y=75
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FREE STREAM VELOCITY	= 100.503	100.503
FREE STREAM TEMPERATURE	= 69.198	
WALL TEMPERATURE	= 91.717	
WALL HEAT FLUX	= .07837	
FREE STREAM DENSITY	= .07496	
FREE STREAM KINEMATIC VISCOSITY	= .0001626	
DENSITY OF FLUID AT WALL	= .07130	
KINEMATIC VISCOSITY OF FLUID AT WALL	= .0001754	
WALL/FREE STREAM DENSITY RATIO	= .95917	
LOCATION REYNOLDS NUMBER (REX)	= 3095196.34	
INPUT VALUE OF VELOCITY DELTA	= 1.92700	
INPUT VALUE OF TEMPERATURE DELTA	= 2.15800	
CALCULATED DELTA		1.35254
DELTA 99.5% INPUT	= .00700	
DISPLACEMENT THICKNESS (DFLSTAR)	= .14836	.14852
MOMENTUM THICKNESS (THETA)	= .11267	.11273
ENERGY-DISSIPATION THICKNESS	= .20577	.20581
ENTHALPY THICKNESS	= .00471	.00471
SHAPE FACTOR 12 (DFLSTAR/THETA)	= 1.31762	1.31752
SHAPE FACTOR 32 (ENERGY/THETA)	= 1.82746	1.82582
MOMENTUM THICKNESS REYNOLDS NUMBER	= 5789.31	5795.84
DISPLACEMENT THICKNESS REYNOLDS NUMBER	= 7628.12	7636.14
SKIN FRICTION COEFFICIENT	= .003147	
FRICITION VELOCITY	= 4.07789	
LAW OF THE WALL CONSTANT (K)	= 4.10000	
LAW OF THE WALL CONSTANT (C)	= 5.00000	
WAKE STRENGTH		.10171
CLAUSERS "DFLTA" INTEGRAL	= -7.42565	-7.55121
CLAUSERS "C" INTEGRAL	= 18.45581	18.47029
DISPLACEMENT THICKNESS - CONSTANT DENSITY	= .14122	.14384
MOMENTUM THICKNESS - CONSTANT DENSITY	= .11347	.11354
SHAPE FACTOR 12 - CONSTANT DENSITY	= 1.24529	1.26697

LOCATION -X- 60.20000

Z = -6 INCHES

Table 74.

JOE KLD74 TAPE 21560- FILES 178-159, RUNS 9.01-9.22 08/10/70

RUN NO. C. POINT 17. GRID NO. 4

REDUCED PROFILE DATA

Y	U	T	U/U'	T/H/T	U-U'	U-U'	T-U'	Y
1	TA	F	DEP	DEP	DEP	DEP	DEP	141
2	36	54	84	364	370	15.0	8.976	9.537
3	36	54	83	364	370	-13.0	9.476	10.872
4	36	54	81	375	375	-13.0	10.725	11.761
5	36	54	81	468	432	-12.0	11.561	12.275
6	36	54	81	491	454	-11.0	11.931	12.792
7	36	54	81	491	454	-11.0	11.931	13.085
8	36	54	81	491	454	-11.0	11.931	13.856
9	36	54	81	491	454	-11.0	11.931	14.629
10	36	54	81	491	454	-11.0	11.931	15.401
11	36	54	81	491	454	-11.0	11.931	16.175
12	36	54	81	491	454	-11.0	11.931	16.945
13	36	54	81	491	454	-11.0	11.931	17.715
14	36	54	81	491	454	-11.0	11.931	18.485
15	36	54	81	491	454	-11.0	11.931	19.255
16	36	54	81	491	454	-11.0	11.931	19.985
17	36	54	81	491	454	-11.0	11.931	20.755
18	36	54	81	491	454	-11.0	11.931	21.525
19	36	54	81	491	454	-11.0	11.931	22.295
20	36	54	81	491	454	-11.0	11.931	23.065
21	36	54	81	491	454	-11.0	11.931	23.835
22	36	54	81	491	454	-11.0	11.931	24.605
23	36	54	81	491	454	-11.0	11.931	25.375
24	36	54	81	491	454	-11.0	11.931	26.145
25	36	54	81	491	454	-11.0	11.931	26.915
26	36	54	81	491	454	-11.0	11.931	27.685
27	36	54	81	491	454	-11.0	11.931	28.455
28	36	54	81	491	454	-11.0	11.931	29.225
29	36	54	81	491	454	-11.0	11.931	29.995
30	36	54	81	491	454	-11.0	11.931	30.765
31	36	54	81	491	454	-11.0	11.931	31.535
32	36	54	81	491	454	-11.0	11.931	32.305
33	36	54	81	491	454	-11.0	11.931	33.075
34	36	54	81	491	454	-11.0	11.931	33.845
35	36	54	81	491	454	-11.0	11.931	34.615
36	36	54	81	491	454	-11.0	11.931	35.385
37	36	54	81	491	454	-11.0	11.931	36.155
38	36	54	81	491	454	-11.0	11.931	36.925
39	36	54	81	491	454	-11.0	11.931	37.695
40	36	54	81	491	454	-11.0	11.931	38.465
41	36	54	81	491	454	-11.0	11.931	39.235
42	36	54	81	491	454	-11.0	11.931	39.995
43	36	54	81	491	454	-11.0	11.931	40.765
44	36	54	81	491	454	-11.0	11.931	41.535
45	36	54	81	491	454	-11.0	11.931	42.305
46	36	54	81	491	454	-11.0	11.931	43.075
47	36	54	81	491	454	-11.0	11.931	43.845
48	36	54	81	491	454	-11.0	11.931	44.615
49	36	54	81	491	454	-11.0	11.931	45.385
50	36	54	81	491	454	-11.0	11.931	46.155
51	36	54	81	491	454	-11.0	11.931	46.925
52	36	54	81	491	454	-11.0	11.931	47.695
53	36	54	81	491	454	-11.0	11.931	48.465
54	36	54	81	491	454	-11.0	11.931	49.235
55	36	54	81	491	454	-11.0	11.931	49.995
56	36	54	81	491	454	-11.0	11.931	50.765
57	36	54	81	491	454	-11.0	11.931	51.535
58	36	54	81	491	454	-11.0	11.931	52.305
59	36	54	81	491	454	-11.0	11.931	53.075
60	36	54	81	491	454	-11.0	11.931	53.845
61	36	54	81	491	454	-11.0	11.931	54.615
62	36	54	81	491	454	-11.0	11.931	55.385
63	36	54	81	491	454	-11.0	11.931	56.155
64	36	54	81	491	454	-11.0	11.931	56.925
65	36	54	81	491	454	-11.0	11.931	57.695
66	36	54	81	491	454	-11.0	11.931	58.465
67	36	54	81	491	454	-11.0	11.931	59.235
68	36	54	81	491	454	-11.0	11.931	59.995
69	36	54	81	491	454	-11.0	11.931	60.765
70	36	54	81	491	454	-11.0	11.931	61.535
71	36	54	81	491	454	-11.0	11.931	62.305
72	36	54	81	491	454	-11.0	11.931	63.075

Table 74.

JOB KLD74 TAPE 3166R- FILCS 13E-159, RUNS 9.01-9.22 04/17/79

RUN NO. 9. POINT 18. GRID NO. 4

BOUNDARY LAYER PROPERTIES

STANDARD
LINEAR
INTERPOLATION
TO WALL

SUPERLAYER
FUNCTION FROM
WALL TO $y+=35$

FREE STREAM VELOCITY	=	100.386	100.386
FREE STREAM TEMPERATURE	=	69.279	
WALL TEMPERATURE	=	91.760	
WALL HEAT FLUX	=	.27913	
FREE STREAM DENSITY	=	.27956	
FREE STREAM KINEMATIC VISCOSITY	=	.0001620	
DENSITY OF FLUID AT WALL	=	.007161	
KINEMATIC VISCOSITY OF FLUID AT WALL	=	.0001754	
WALL/FREE STREAM DENSITY RATIO	=	.05911	
LOCATION REYNOLDS NUMBER (REX)	=	3498176.37	
INPUT VALUE OF VELOCITY DELTA	=	2.20000	
INPUT VALUE OF TEMPERATURE DELTA	=	2.50000	
CALCULATED DELTA	=		1.42645
DELTA 9.0% INPUT	=	.00000	
DISPLACEMENT THICKNESS (DELSTAR)	=	.15985	.15994
MOMENTUM THICKNESS (THETA)	=	.12104	.12124
ENERGY-DISSIPATION THICKNESS	=	.22118	.22131
E ^{1/2} THALPY THICKNESS	=	.50524	.50524
SHAPE FACTOR 12 (DELSTAR/THETA)	=	1.32086	1.71916
SHAPE FACTOR 72 (ENERGY/THETA)	=	1.82732	1.82547
MOMENTUM THICKNESS REYNOLDS NUMBER	=	5216.01	6276.12
DISPLACEMENT THICKNESS REYNOLDS NUMBER	=	5210.49	5213.26
SKIN FRICTION COEFFICIENT	=	.003777	
FRICITION VELOCITY	=	4.02088	
LAW OF THE WALL CONSTANT (K)	=	.41000	
LAW OF THE WALL CONSTANT (C)	=	5.00000	
WAKE STRENGTH	=		.13791
CLAUSERS "DELTA" INTEGRAL	=	-3.71652	-3.86331
CLAUSERS "G" INTEGRAL	=	20.42429	20.32668
DISPLACEMENT THICKNESS - CONSTANT DENSITY	=	.15178	.15474
MOMENTUM THICKNESS - CONSTANT DENSITY	=	.12192	.12213
SHAPE FACTOR 12 - CONSTANT DENSITY	=	1.24434	1.26707

LOCATION -y- 68.12000

Z = CENTERLINE

Table 75.

JOB KL074 TAPE 376cF- FILES 138-159, RUNS 9.01-9.72 04/17/79

RUN NO. C. POINT IP. GRID NO. 4

~~REDUCED PROFILE DATA~~

Table 75.

JOB KLD74 TAPE 3156P- FILES 138-159, RUNS 9.71-9.22 04/17/79

RUN NO. 9. POINT 19. GRID NO. 4

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO Y+ = 35
FREE STREAM VELOCITY	100.232	100.232
FREE STREAM TEMPERATURE	67.964	
WALL TEMPERATURE	90.500	
WALL HEAT FLUX	.07834	
FREE STREAM DENSITY	.07494	
FREE STREAM KINEMATIC VISCOSITY	.0001627	
DENSITY OF FLUID AT WALL	.57137	
KINEMATIC VISCOSITY OF FLUID AT WALL	.0001751	
WALL/FREE STREAM DENSITY RATIO	.95914	
LOCATION REYNOLDS NUMBER (REX)	3011884.56	
INPUT VALUE OF VELOCITY DELTA	2.40000	
INPUT VALUE OF TEMPERATURE DELTA	2.50700	
CALCULATED DELTA		1.56099
DELTA .09.52 INPUT	.00000	
DISPLACEMENT THICKNESS (DELSTAR)	.17361	.17361
MOMENTUM THICKNESS (THETA)	.13122	.13146
ENERGY-DISSIPATION THICKNESS	.23970	.23999
ENTHALPY THICKNESS	.00590	.00591
SHAPE FACTOR 12 (DELSTAR/THETA)	.1.32325	.1.72059
SHAPE FACTOR 32 (ENERGY/THETA)	.1.82672	.1.92472
MOMENTUM THICKNESS REYNOLDS NUMBER	6738.23	6750.87
DISPLACEMENT THICKNESS REYNOLDS NUMBER	8915.02	8915.01
SKIN FRICTION COEFFICIENT	.0047228	
FRICITION VELOCITY	3.98220	
LAW OF THE WALL CONSTANT (K)	.41700	
LAW OF THE WALL CONSTANT (C)	5.00000	
WAKE STRENGTH	.33971	
CLAUSERS "DELTA" INTEGRAL	-4.05934	-4.22154
CLAUSERS "G" INTEGRAL	22.49977	22.32777
DISPLACEMENT THICKNESS - CONSTANT DENSITY	.16449	.16777
MOMENTUM THICKNESS - CONSTANT DENSITY	.17221	.13247
SHAPE FACTOR 12 - CONSTANT DENSITY	1.24418	1.26602

LOCATION -X- 76.18701

Z = CENTERLINE

Table 76.

JOE KLOTH TAPE 3156A- FILES 13P-159, FUNS 9.21-9.22 7/17/78

RUN NO. 9 POINT 19. ERTD NO. 4

REDUCED PROFILE DATA

Table 76.

JOB KLD74 TAPE 316AF - FILES 134-159, RUNS 9.01-9.72 74/10/79

RUN NO. 9. POINT 20. GRID NO. 4

BOUNDARY LAYER PROPERTIES

		LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO $Y+ = 75$
FREE STREAM VELOCITY	=	100.000	100.000
FREE STREAM TEMPERATURE	=	68.000	68.000
WALL TEMPERATURE	=	97.000	97.000
WALL HEAT FLUX	=	-0.7954	-0.7954
FREE STREAM KINEMATIC VISCOSITY	=	0.001629	0.001629
DENSITY OF FLUID AT WALL	=	0.001757	0.001757
KINEMATIC VISCOSITY OF FLUID AT WALL	=	95.916	95.916
WALL/FREE STREAM DENSITY RATIO	=	390.9723	390.9723
LOCATION REYNOLDS NUMBER (REX)	=	5.59	5.59
INPUT VALUE OF VELOCITY DELTA	=	2.42000	2.42000
INPUT VALUE OF TEMPERATURE DELTA	=	2.70000	2.70000
CALCULATED DELTA	=		1.63574
DELTA COEF INPUT	=	0.00000	0.00000
DISPLACEMENT THICKNESS (DELSTAR)	=	0.18388	0.18388
MOMENTUM THICKNESS (THETA)	=	0.13714	0.13714
ENERGY-DISSIPATION THICKNESS	=	0.25000	0.25000
ENTHALPY THICKNESS	=	0.20629	0.20637
SHAPE FACTOR 12 (DELSTAR/THETA)	=	1.31999	1.31648
SHAPE FACTOR 72 (ENERGY/THETA)	=	1.62887	1.82699
MOMENTUM THICKNESS REYNOLDS NUMBER	=	7.3646	7.04874
DISPLACEMENT THICKNESS REYNOLDS NUMBER	=	9.26099	9.27954
SKIN FRICTION COEFFICIENT	=	0.0030000	0.0030000
FRICITION VELOCITY	=	3.96968	3.96968
LAW OF THE WALL CONSTANT (K)	=	4.1700	4.1700
LAW OF THE WALL CONSTANT (C)	=	5.00000	5.00000
WAKE STRENGTH	=		0.13657
CLAUSERS "DELTA" INTEGRAL	=	-4.25325	-4.41220
CLAUSERS "C" INTEGRAL	=	23.32972	23.14683
DISPLACEMENT THICKNESS - CONSTANT DENSITY	=	0.17152	0.17465
MOMENTUM THICKNESS - CONSTANT DENSITY	=	0.13814	0.13839
SHAPE FACTOR 12 - CONSTANT DENSITY	=	1.24177	1.26209

LOCATION -X- 76.18001

Z = +6 INCHES

Table 77.

JOE KLD74 TAPE 3166P- FILES 138-159, RUNS 9.71-9.72 04/17/79

RUN NO. °. POINT 20. GRID NO. 4

REDUCED PROFILE DATA

Table 77.

JOE KLD74 TAPE 3166R- FILES 178-159, RUNS 9.21-9.22 74/17/79

RUN NO. 9. POINT 21. GRID NO. 4

BOUNDARY LAYER PROPERTIES

		LINEAR INTERPOLATION TO WALL	STANDARD SUPLAYER FUNCTION FROM WALL TO Y+35
FREE STREAM VELOCITY	=	99.770	99.739
FREE STREAM TEMPERATURE	=	68.762	
WALL TEMPERATURE	=	91.353	
WALL HEAT FLUX	=	•37214	
FREE STREAM DENSITY	=	•57482	
FREE STREAM KINEMATIC VISCOSITY	=	•7701631	
DENSITY OF FLUID AT WALL	=	•807176	
KINEMATIC VISCOSITY OF FLUID AT WALL	=	•7701756	
WALL/FREE STREAM DENSITY RATIO	=	•7701756	
LOCATION REYNOLDS NUMBER (REX)	=	3882019.72	
INPUT VALUE OF VELOCITY DELTA	=	2.45000	
INPUT VALUE OF TEMPERATURE DELTA	=	2.70000	
CALCULATED DELTA	=		1.62362
DELTA 99.5% INPUT	=	•00707	
DISPLACEMENT THICKNESS (DELSTA)	=	•17694	.17694
MOMENTUM THICKNESS (THETA)	=	•13427	.13453
ENERGY-DISSIPATION THICKNESS	=	•24566	.24587
ENTHALPY THICKNESS	=	•00618	.00609
SHAPE FACTOR 12 (DELSTAR/THETA)	=	1.31784	1.31527
SHAPE FACTOR 32 (ENERGY/THETA)	=	1.82964	1.82760
MOMENTUM THICKNESS REYNOLDS NUMBER	=	6.042015	6.055055
DISPLACEMENT THICKNESS REYNOLDS NUMBER	=	9.015064	9.016043
SKIN FRICTION COEFFICIENT	=	•703740	
FRICITION VELOCITY	=	3.97036	
LAW OF THE WALL CONSTANT (K)	=	•41000	
LAW OF THE WALL CONSTANT (C)	=	5.00000	
WAKE STRENGTH	=		.11028
CLAUSERS "DELTA" INTEGRAL	=	-4.12940	-4.29307
CLAUSERS "G" INTEGRAL	=	22.49630	22.31402
DISPLACEMENT THICKNESS - CONSTANT DENSITY	=	•16765	.17290
MOMENTUM THICKNESS - CONSTANT DENSITY	=	•13526	.13554
SHAPE FACTOR 12 - CONSTANT DENSITY	=	1.23941	1.26789

LOCATION -Y- 76.18701

Z = -6 INCHES

Table 78.

JOB KLD74 TAPE 3256R- FILES 138-159, RUNS 9.01-9.72 04/17/79

FUN NO. S. POTNT 21. GRID NO. 4

REDUCED FEOFIL FILE DATA

Y	CH	S	U	T	U/U'	THETA	U-U'	U(+)	T(+)	Y(+)
1	1	1	1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6
7	7	7	7	7	7	7	7	7	7	7
8	8	8	8	8	8	8	8	8	8	8
9	9	9	9	9	9	9	9	9	9	9
10	10	10	10	10	10	10	10	10	10	10
11	11	11	11	11	11	11	11	11	11	11
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15	15	15	15	15	15	15	15	15	15	15
16	16	16	16	16	16	16	16	16	16	16
17	17	17	17	17	17	17	17	17	17	17
18	18	18	18	18	18	18	18	18	18	18
19	19	19	19	19	19	19	19	19	19	19
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24	24	24	24	24	24	24	24	24	24	24
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28	28	28	28	28	28	28	28	28	28	28
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42	42	42	42	42	42	42	42	42	42	42
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73	73	73	73	73	73	73	73	73	73	73
74	74	74	74	74	74	74	74	74	74	74
75	75	75	75	75	75	75	75	75	75	75
76	76	76	76	76	76	76	76	76	76	76
77	77	77	77	77	77	77	77	77	77	77
78	78	78	78	78	78	78	78	78	78	78

Table 78.

JOB KLD74 TAPE 3166R- FILES 138-159, RUNS 9.01-9.22 04/17/79

RUN NO. 9. POINT 22. GRID NO. 4

BOUNDARY LAYER PROPERTIES

	LINEAR INTERPOLATION TO WALL	STANDARD SUBLAYER FUNCTION FROM WALL TO Y+ = 35
FREE STREAM VELOCITY	100.636	100.636
FREE STREAM TEMPERATURE	69.316	
WALL TEMPERATURE	91.877	
WALL HEAT FLUX	.07764	
FREE STREAM DENSITY	.0001634	
KINEMATIC VISCOSITY OF FLUID AT WALL	.07162	
WALL/FREE STREAM DENSITY RATIO	.7501750	
LOCATION REYNOLDS NUMBER (REFX)	.95011	
INPUT VALUE OF VELOCITY DELTA	2.66566	
INPUT VALUE OF TEMPERATURE DELTA	3.00000	
(CALCULATED) DELTA		1.60511
DELTA 99.5% INPUT	.15000	
DISPLACEMENT THICKNESS (DELSTAR)	.17947	.17947
MOMENTUM THICKNESS (THETA)	.12631	.13615
ENERGY-DISSIPATION THICKNESS	.24954	.24954
ENTHALPY THICKNESS	.00617	.00514
SHAPE FACTOR 12 (DELSTAR/THETA)	1.71049	1.71049
SHAPE FACTOR 22 (ENERGY/THETA)	1.82731	1.82622
MOMENTUM THICKNESS REYNOLDS NUMBER	605.69	6997.74
DISPLACEMENT THICKNESS REYNOLDS NUMBER	9211.22	9211.14
SKIN FRICTION COEFFICIENT	.0025001	
FRICITION VELOCITY	3.98760	
LAW OF THE WALL CONSTANT (K)	.41000	
LAW OF THE WALL CONSTANT (C)	5.00000	.15016
WAKE STRENGTH		
CLAUSERS *DELTA* INTEGRAL	-4.25056	-4.36257
CLAUSERS *C* INTEGRAL	27.22857	23.11617
DISPLACEMENT THICKNESS - CONSTANT DENSITY	.17769	.17338
MOMENTUM THICKNESS - CONSTANT DENSITY	.17704	.13719
SHAPE FACTOR 12 - CONSTANT DENSITY	1.24697	1.26367
LOCATION -X-	84.00000	
Z = CENTERLINE		

Table 79.

JCF KLD74 TAPE 3166A- FILES 13E-159, RUNS 9.01-9.22 04/17/79

RUN NO. 9. POINT 22.

GRID NO. 4

REDUCED PROFILE DATA

	Y	Z	U	T	U/U'	THF/T	U-UF	U+1	T(+)	T(-)
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3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4
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52	52	52	52	52	52	52	52	52	52	52
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72	72	72	72	72	72	72	72	72	72	72
73	73	73	73	73	73	73	73	73	73	73
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Table 79.

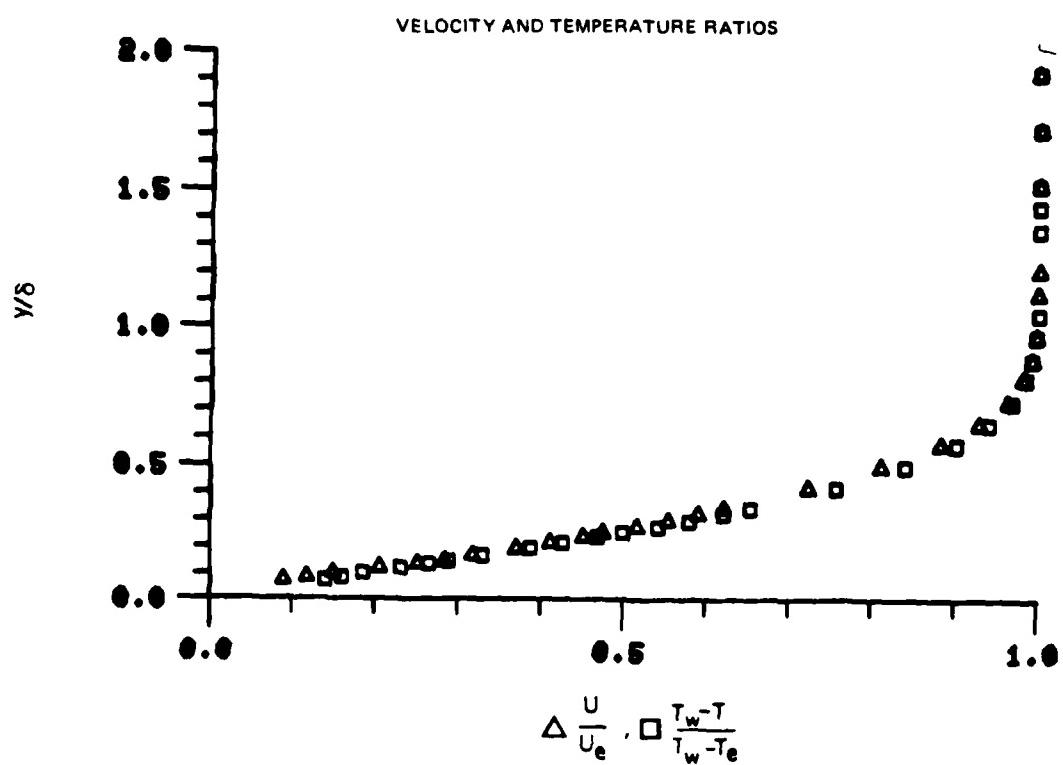


Figure 1. Boundary Layer Velocity and Temperature Profiles
Run No. 5 Point No. 1

78-12-100-1

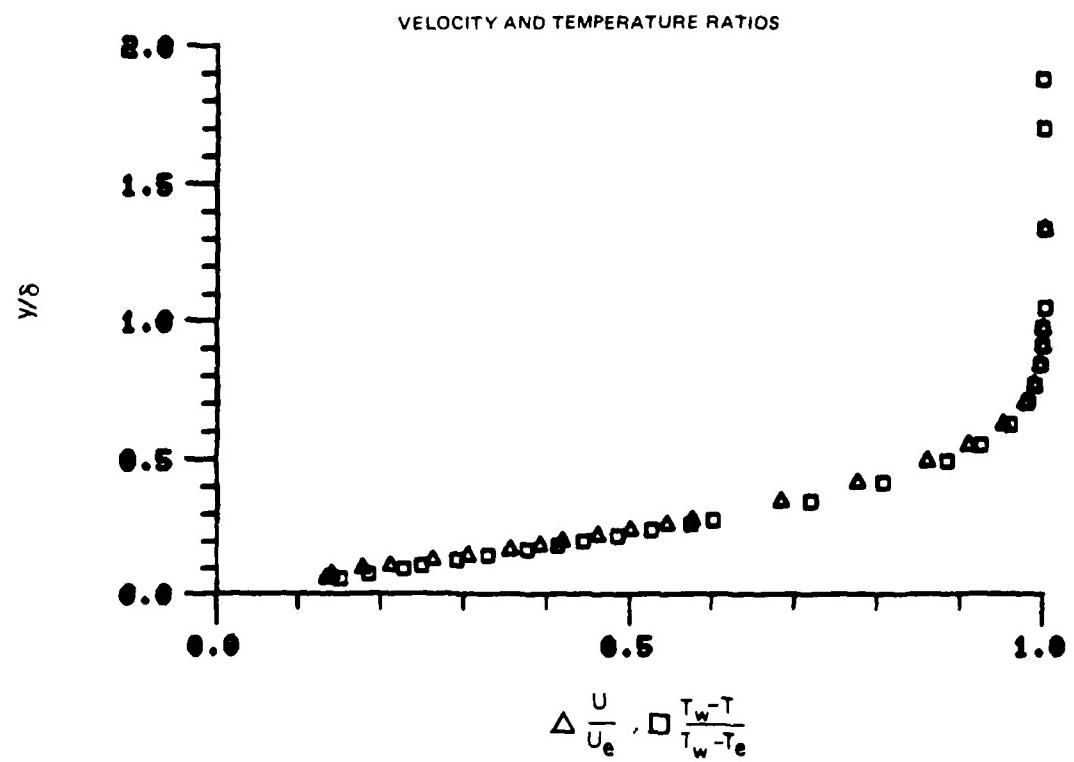


Figure 2. Boundary Layer Velocity and Temperature Profiles
Run No. 5 Point No. 2

78-12-100-1

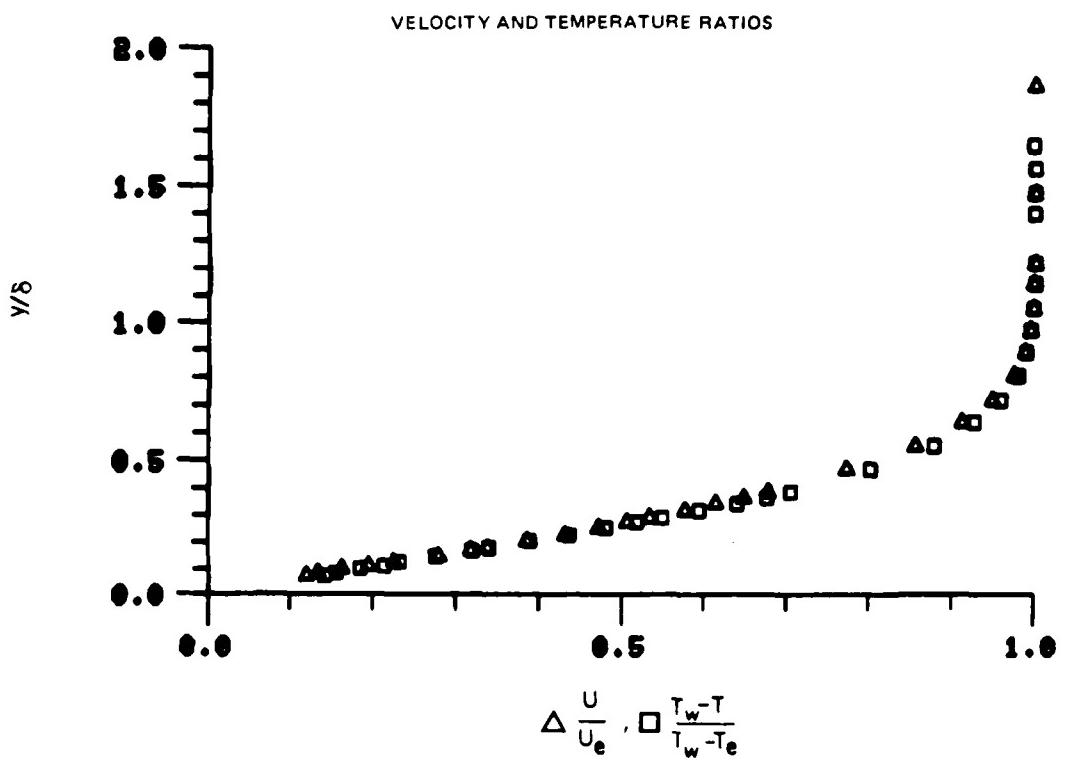


Figure 3. Boundary Layer Velocity and Temperature Profiles
Run No. 5 Point No. 3

78-12-100-1

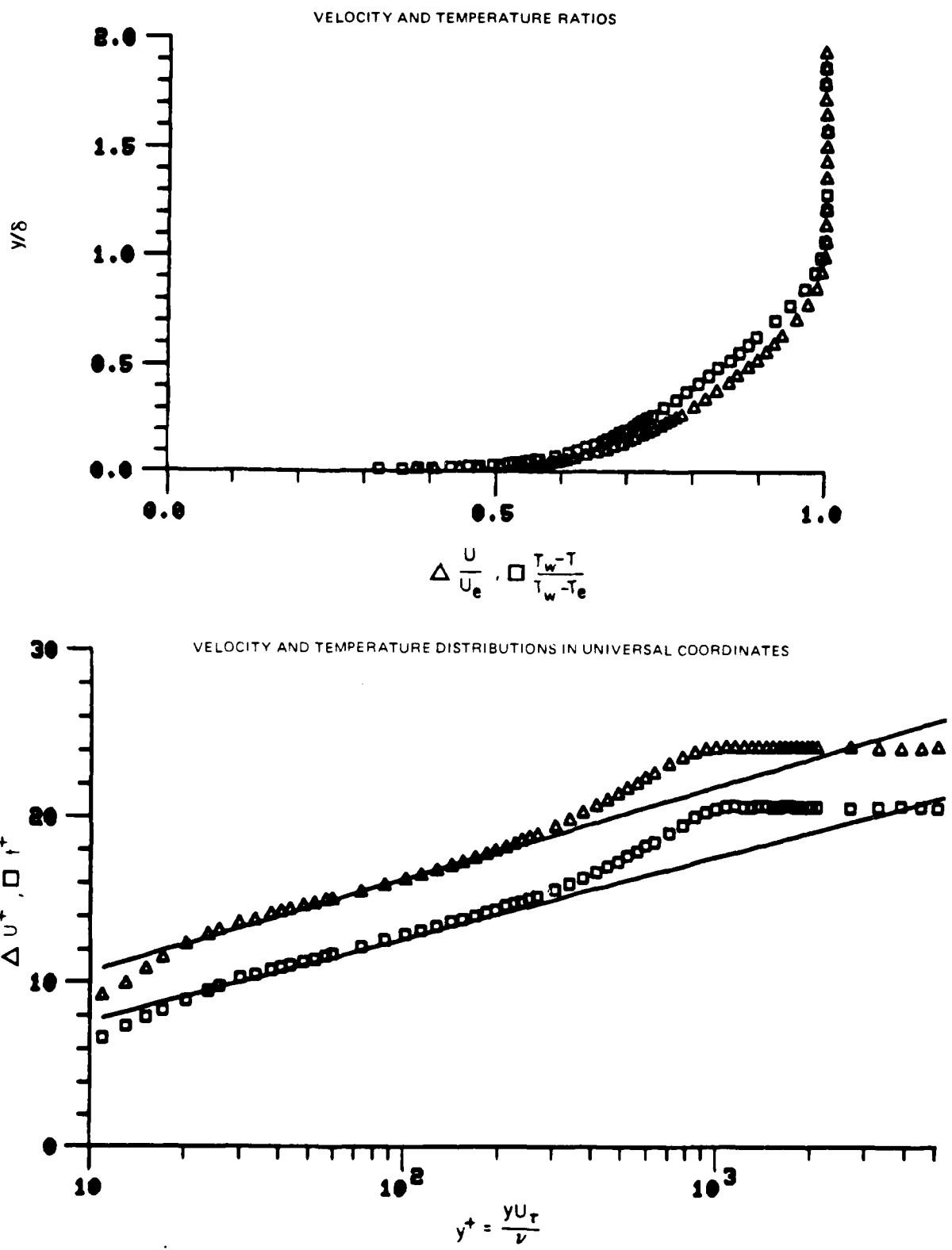


Figure 4. Boundary Layer Velocity and Temperature Profiles
Run No. 5 Point No. 4

78-12-100-1

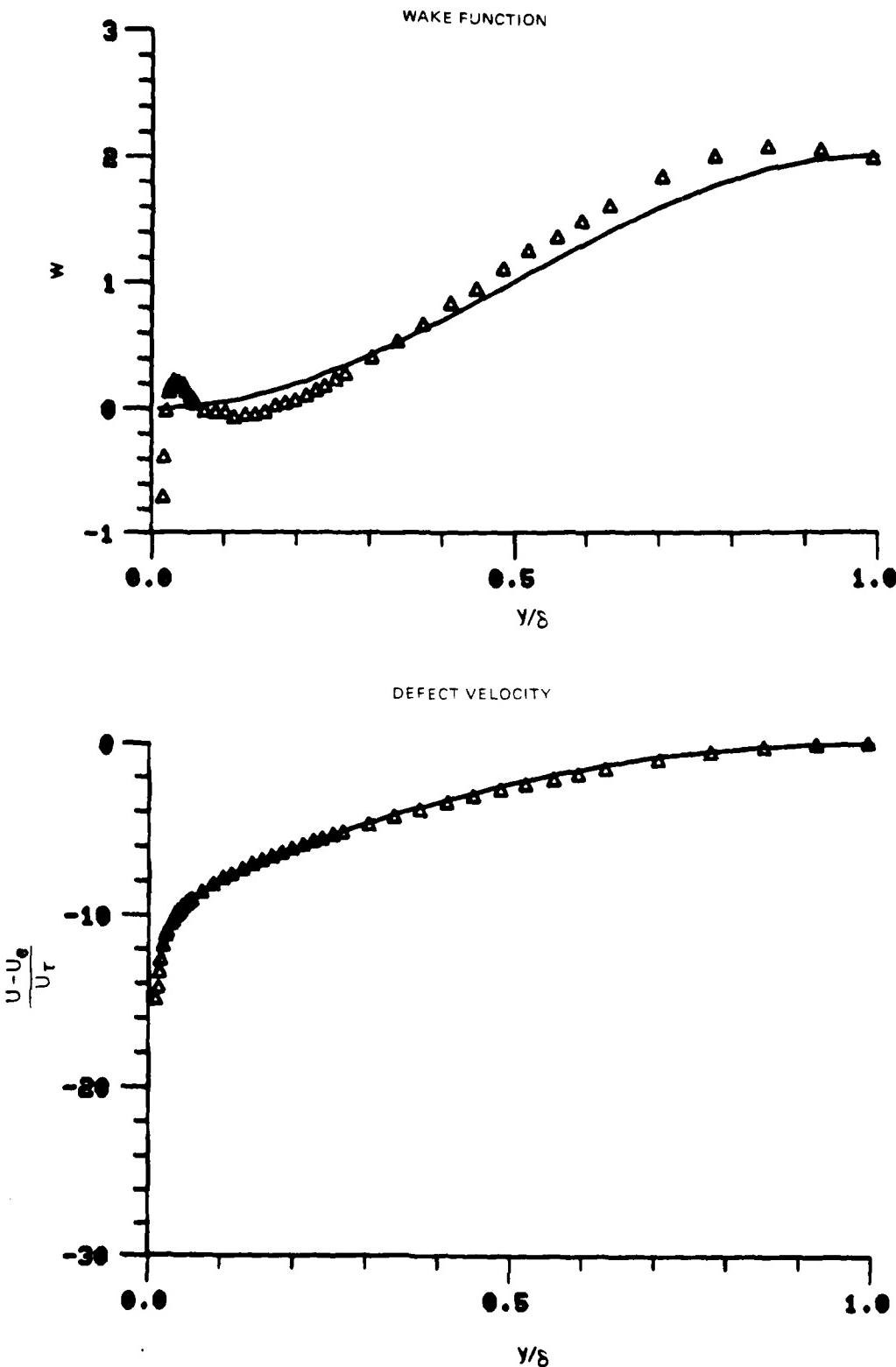


Figure 4. Boundary Layer Velocity Profiles
Run No. 5 Point No. 4

78-12-100-2

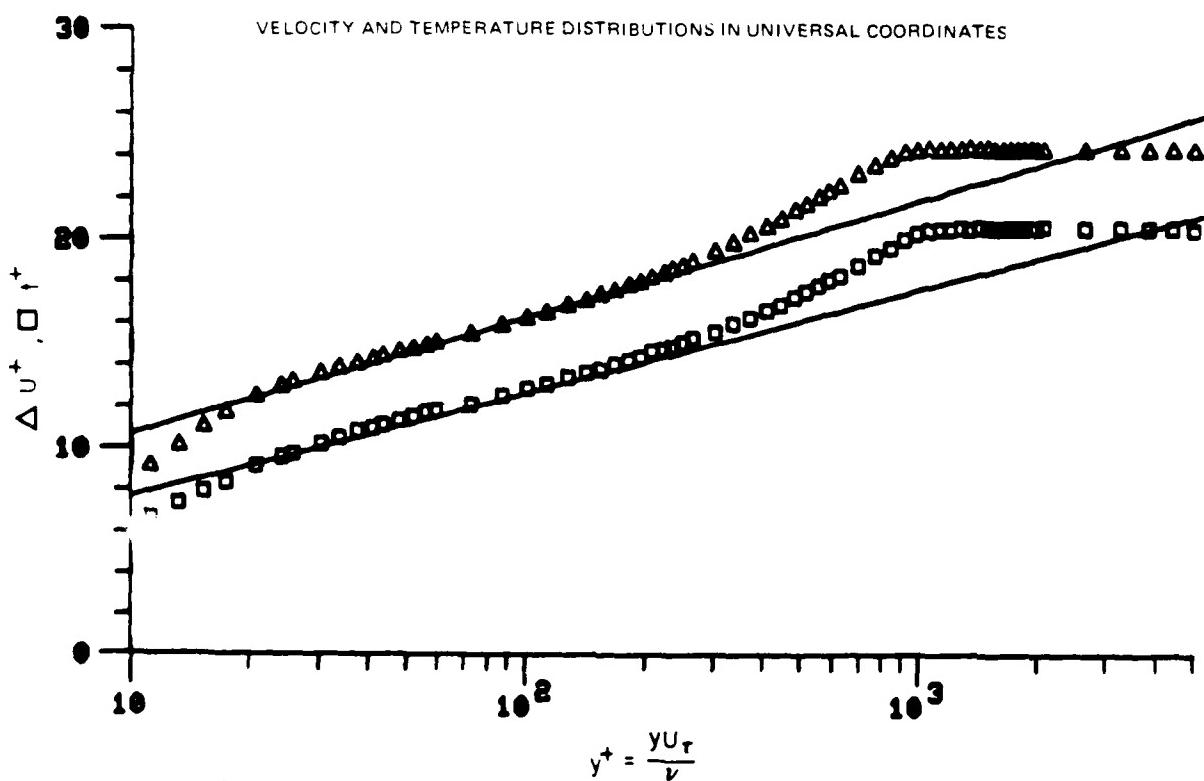
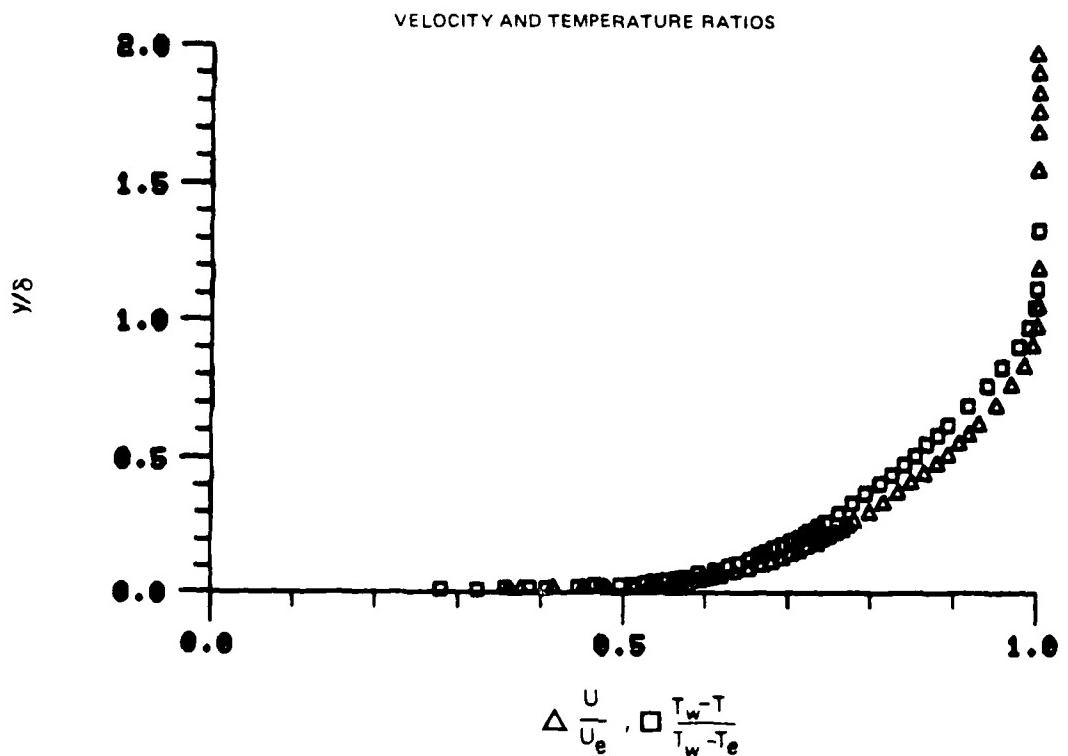


Figure 5. Boundary Layer Velocity and Temperature Profiles
Run No. 5 Point No. 5

78-12-100-1

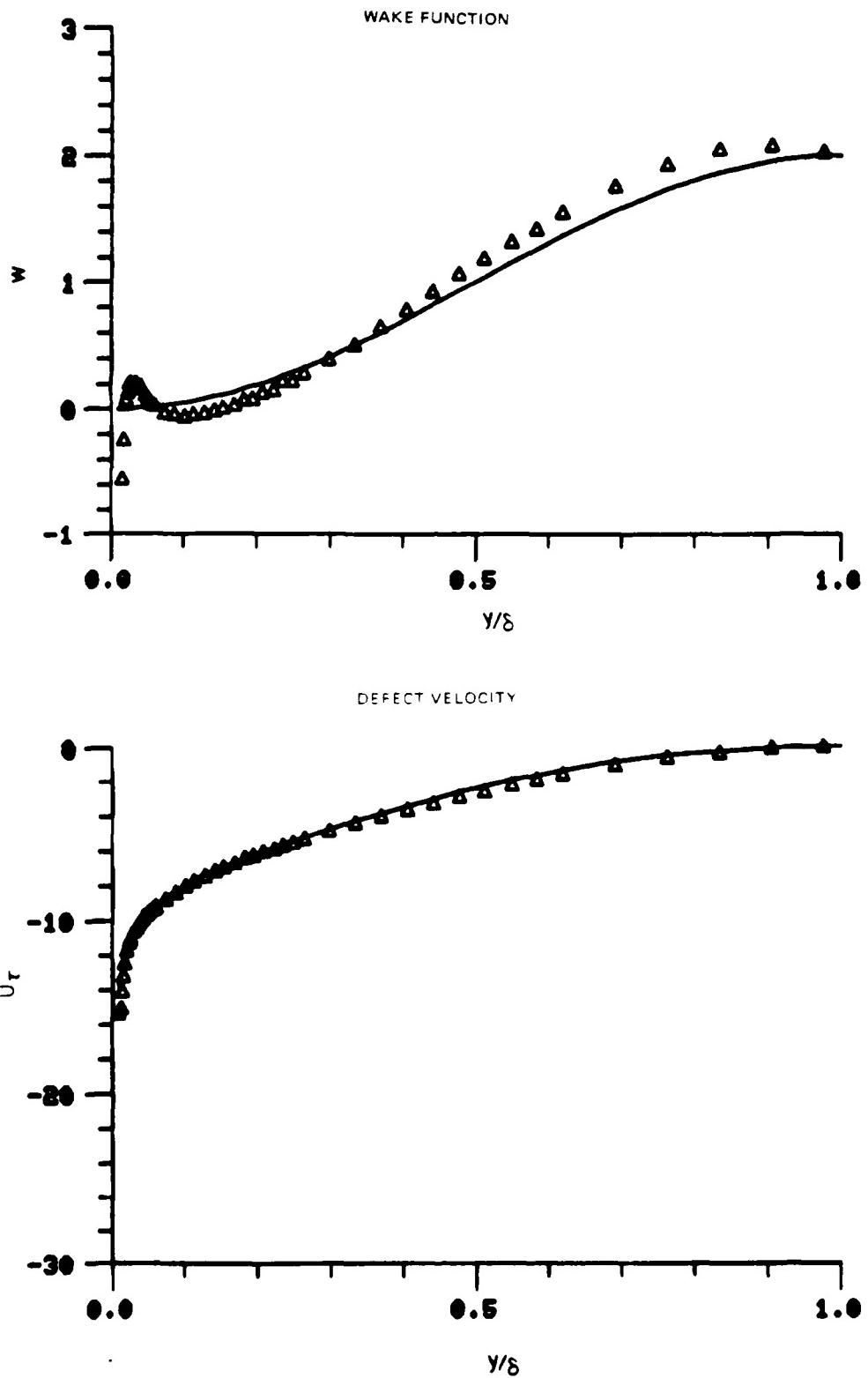


Figure 5. Boundary Layer Velocity Profiles
Run No. 5 Point No. 5

78-12-100-2

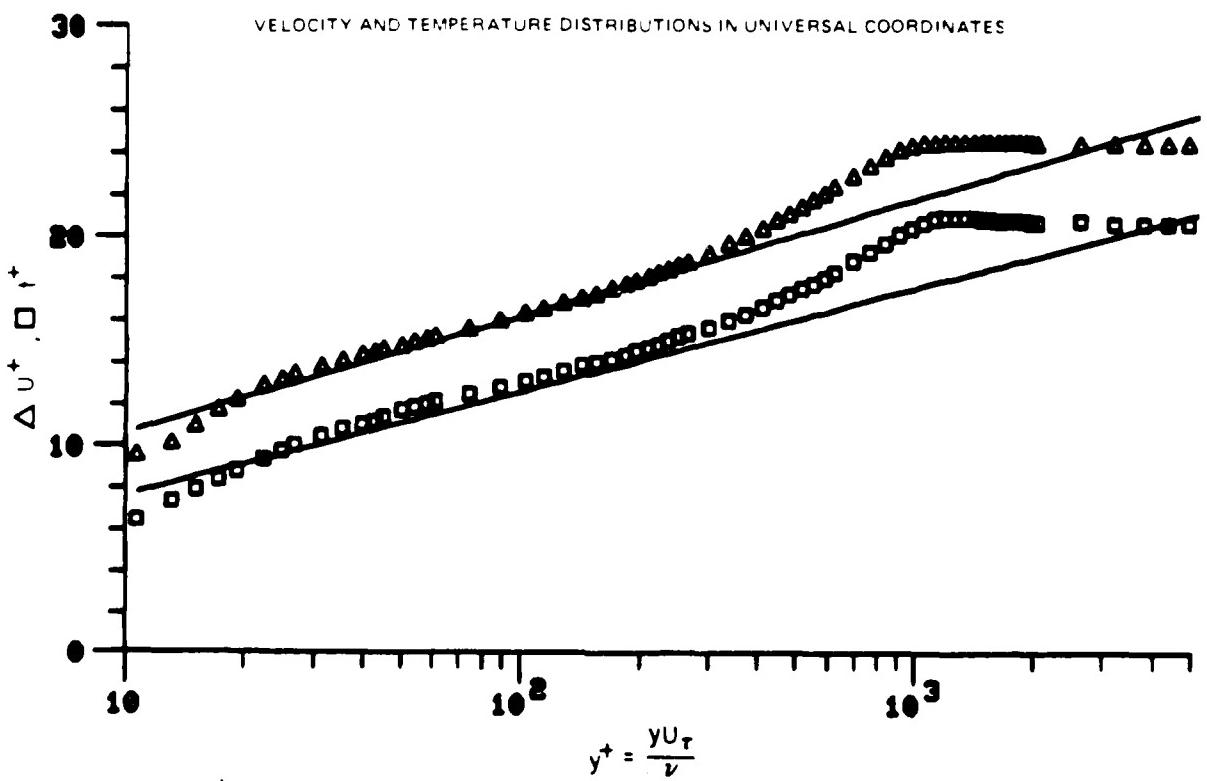
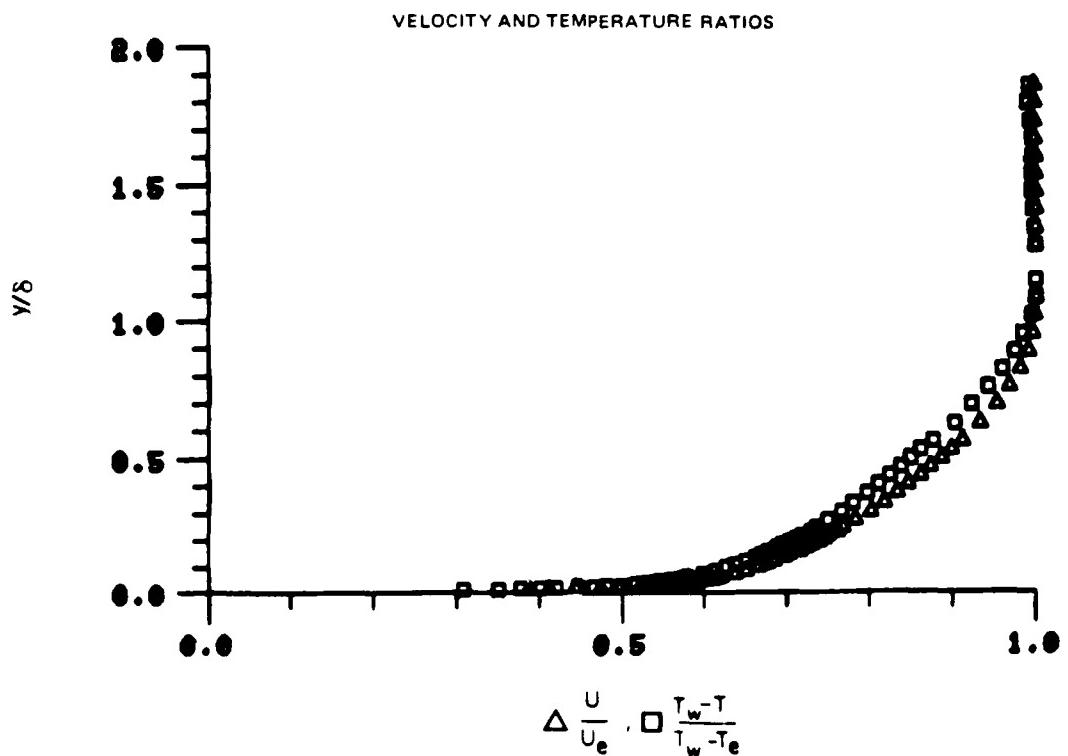


Figure 6. Boundary Layer Velocity and Temperature Profiles
Run No. 5 Point No. 7

78-12-100-1

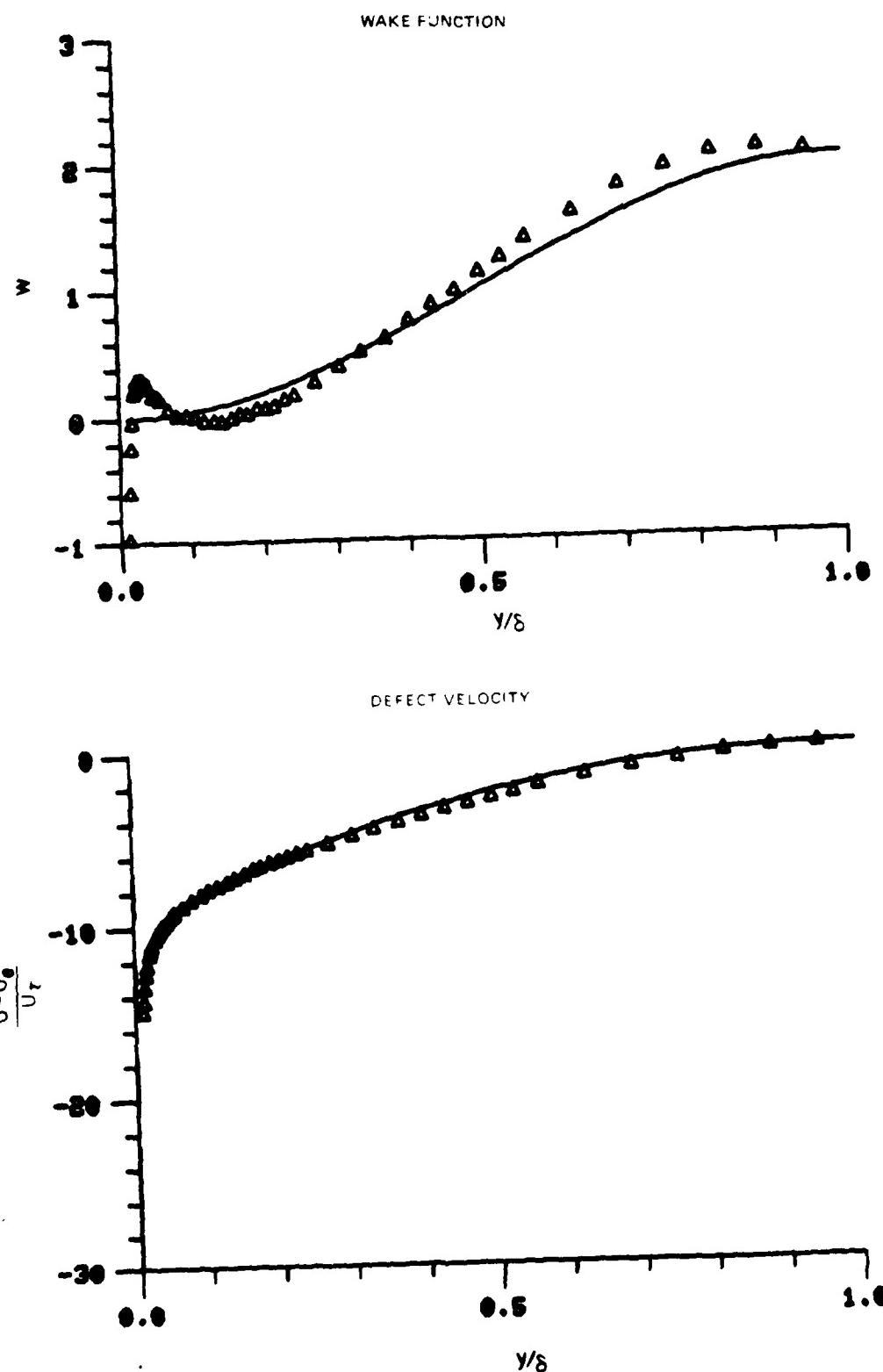


Figure 6. Boundary Layer Velocity Profiles
Run No. 5 Point No. 7

78-12-100-2

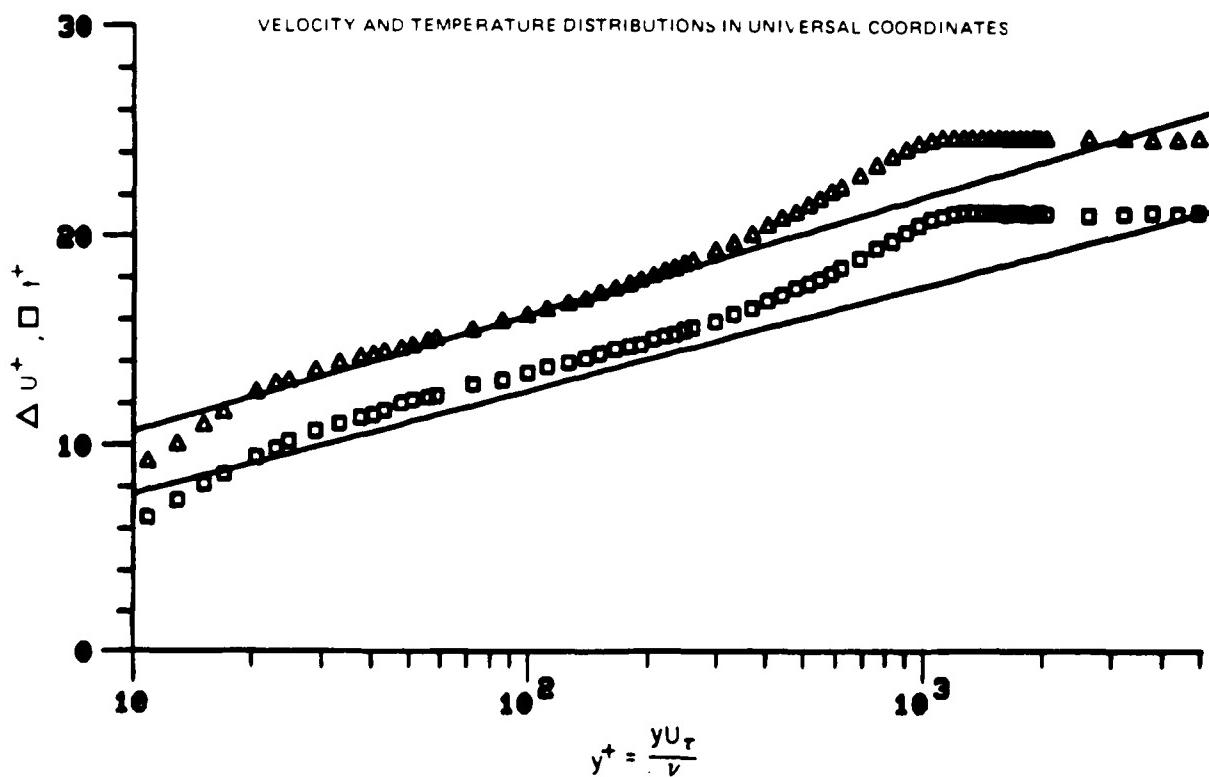
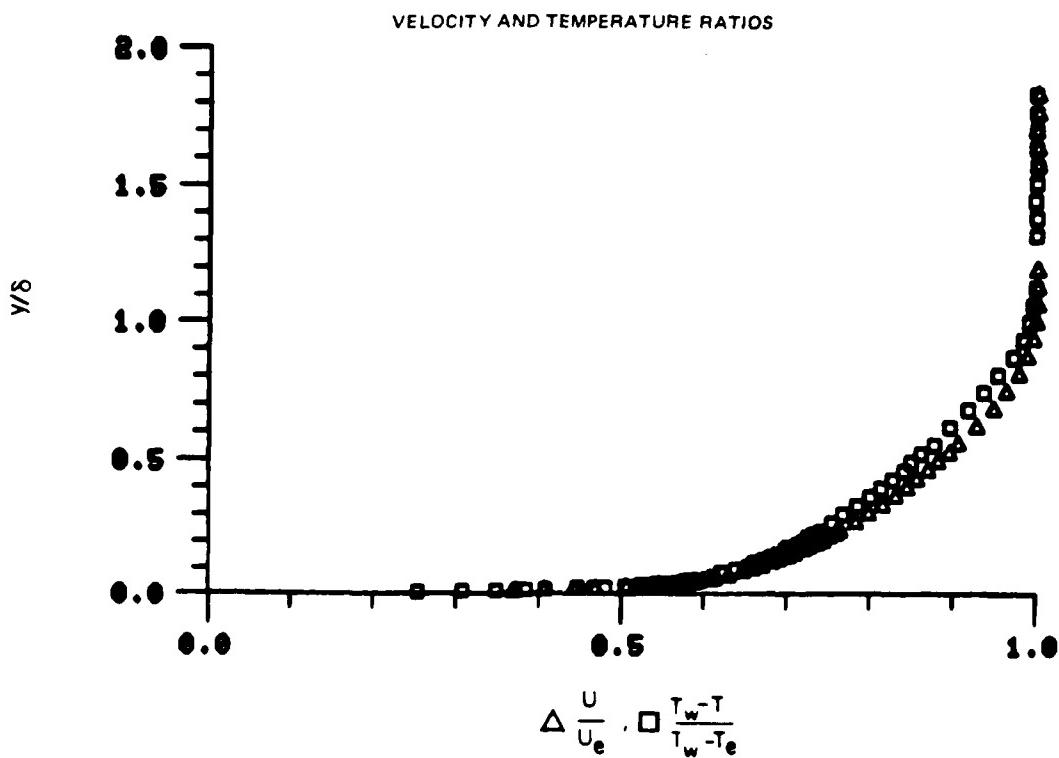


Figure 7. Boundary Layer Velocity and Temperature Profiles
Run No. 5 Point No. 8

78-12-100-1

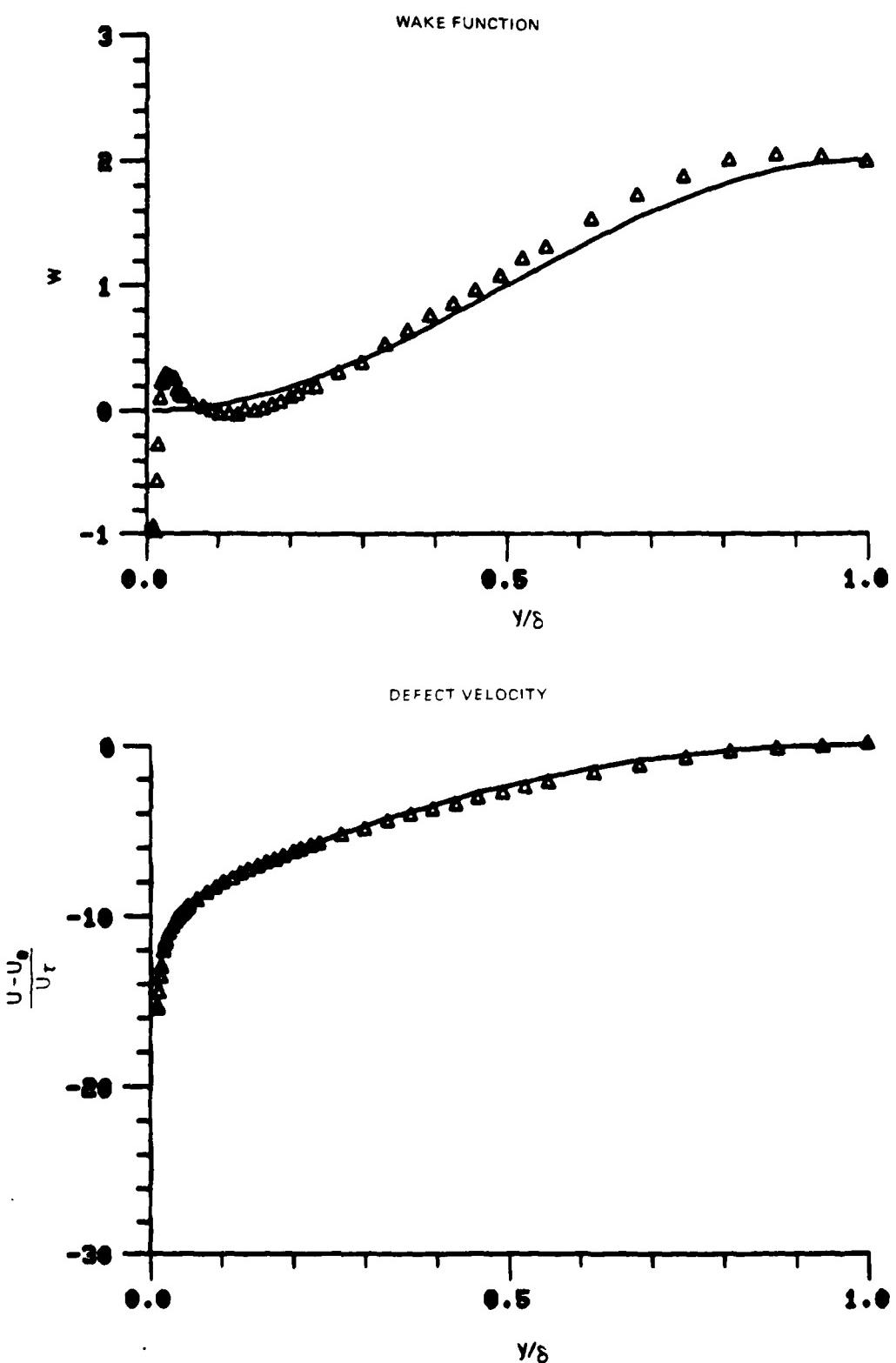


Figure 7. Boundary Layer Velocity Profiles
Run No. 5 Point No. 8

78-12-100-2

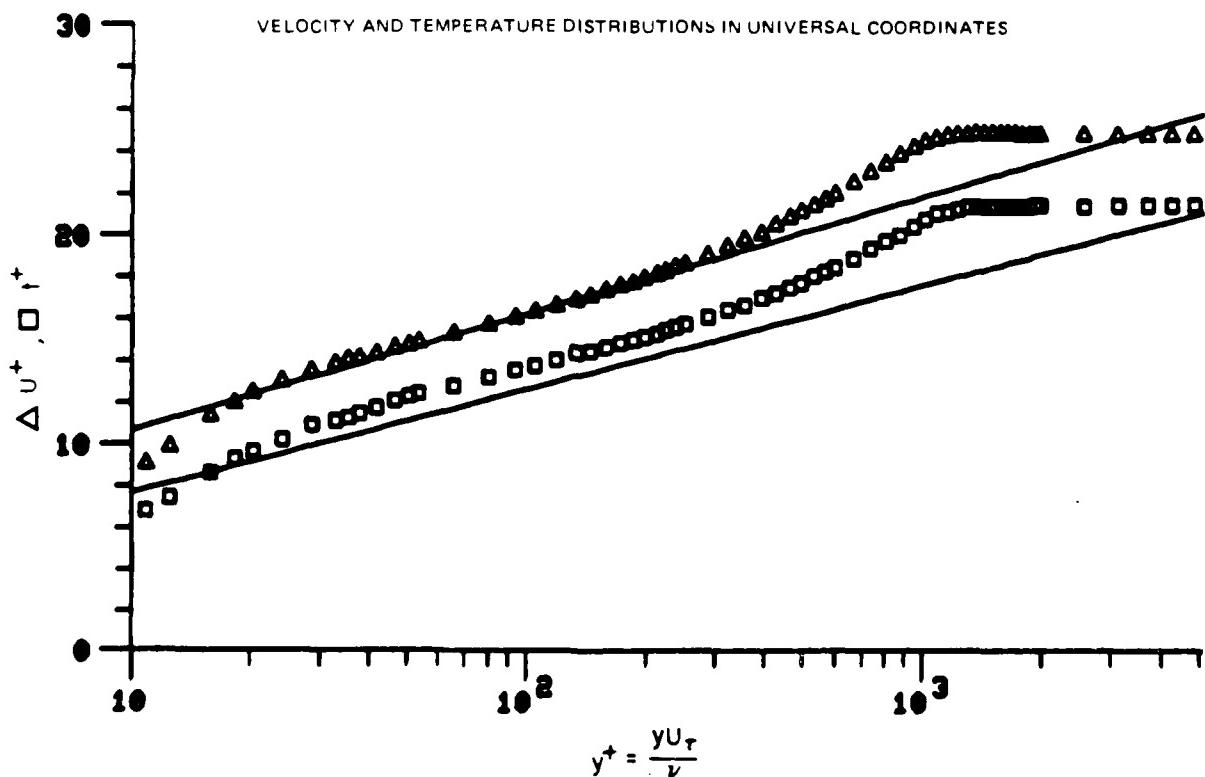
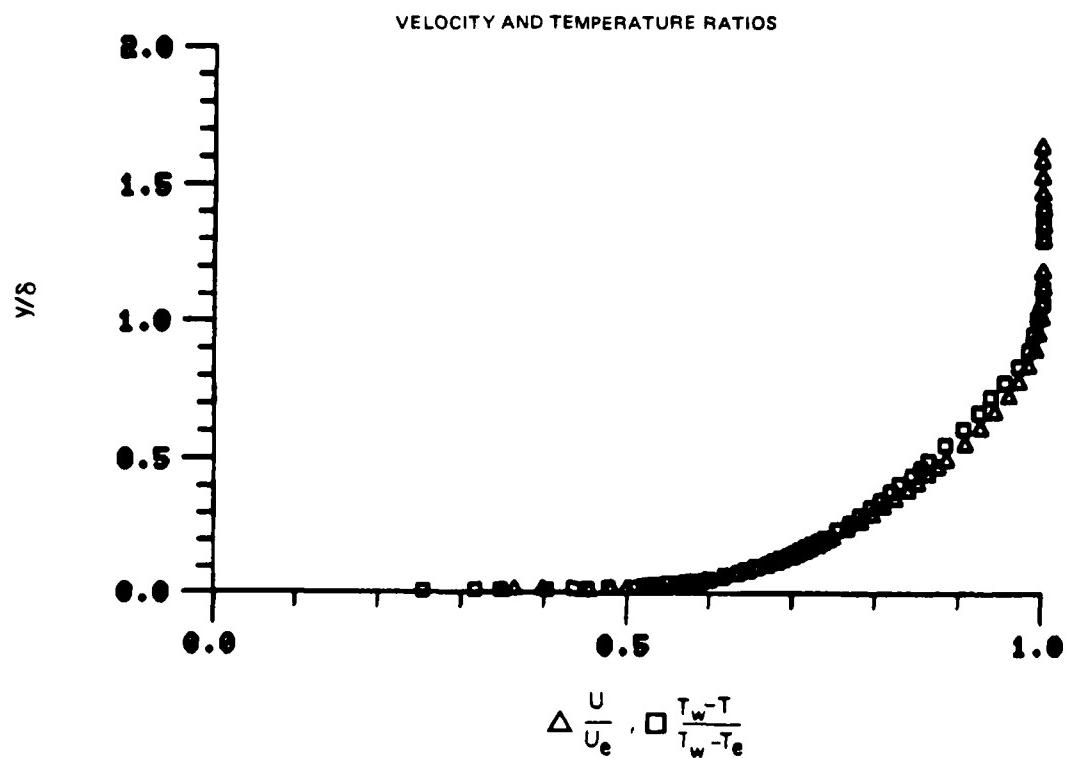


Figure 8. Boundary Layer Velocity and Temperature Profiles
Run No. 5 Point No. 11

78-12-100-1

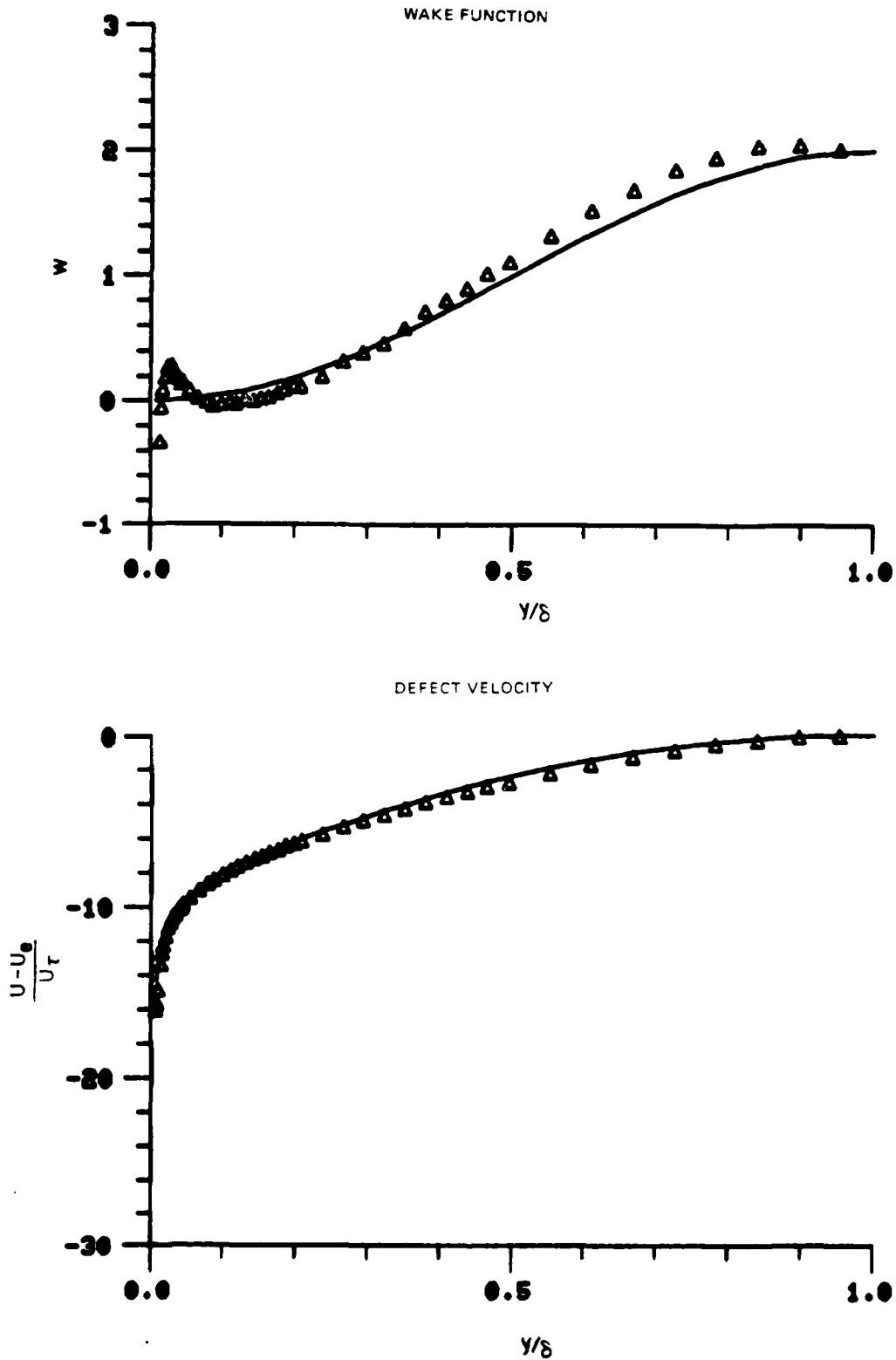
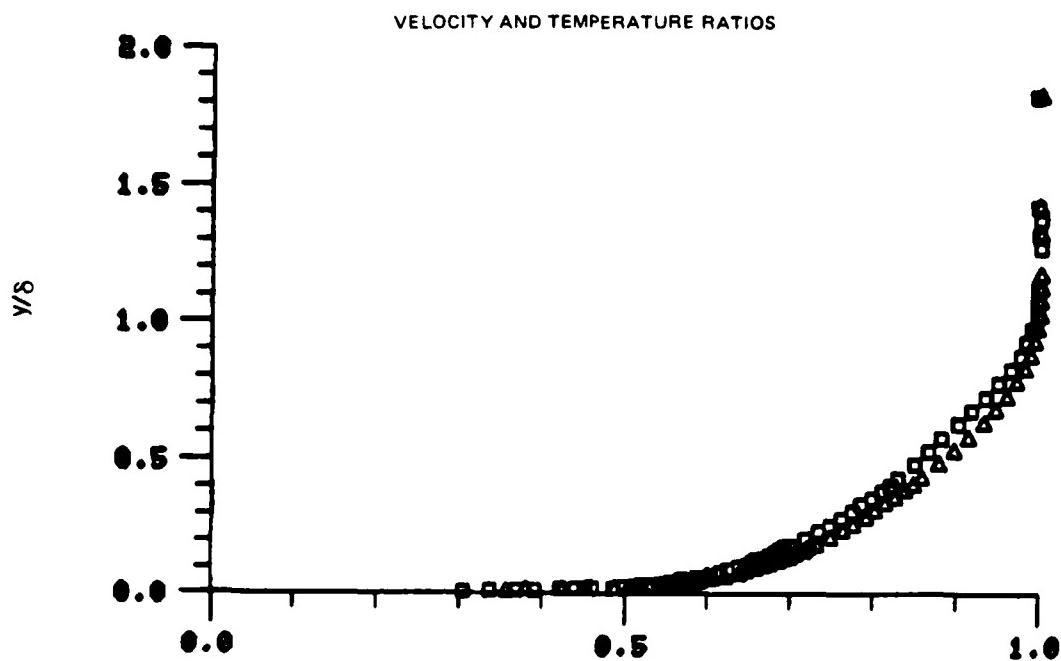


Figure 8. Boundary Layer Velocity Profiles
Run No. 5 Point No. 11

78-12-100-2



$$\Delta \frac{U}{U_e}, \square \frac{T_w - T}{T_w - T_e}$$

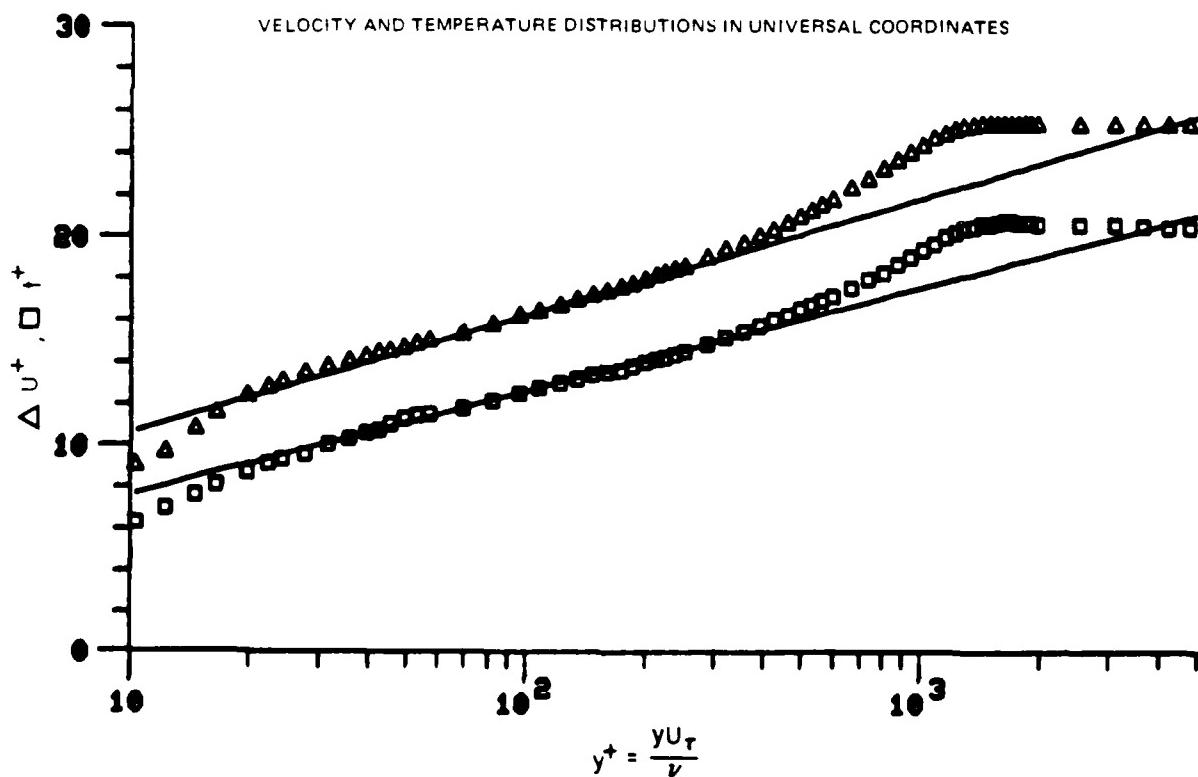


Figure 9. Boundary Layer Velocity and Temperature Profiles
Run No. 5 Point No. 13

78-12-100-1

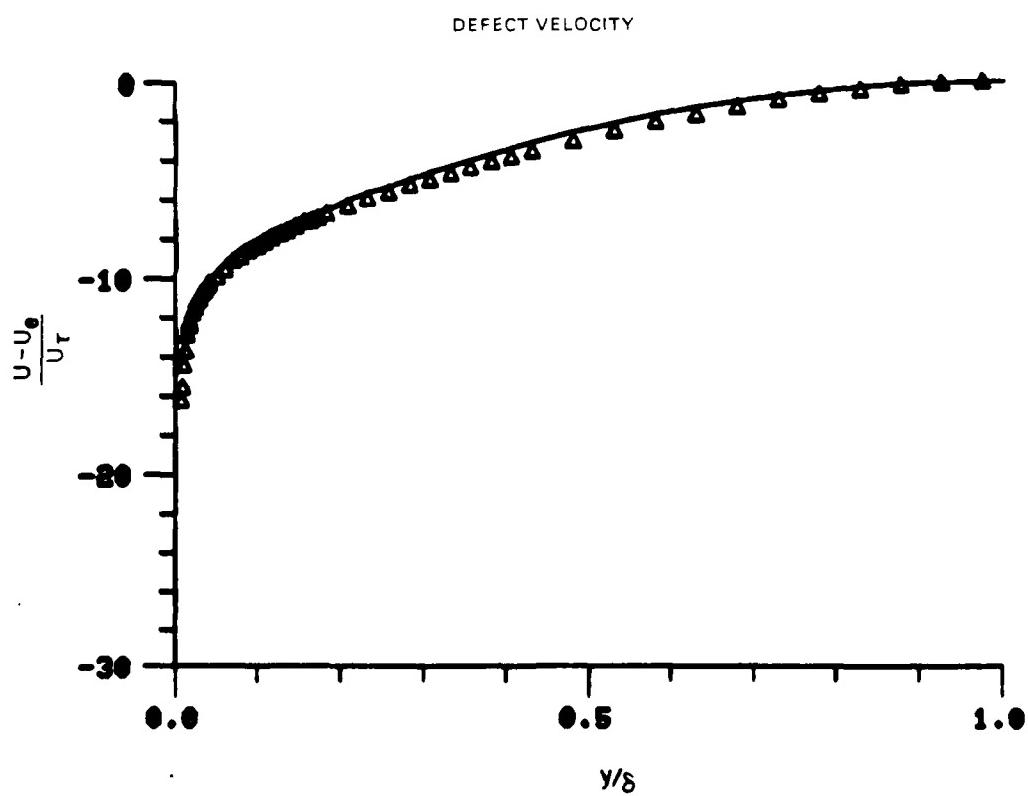
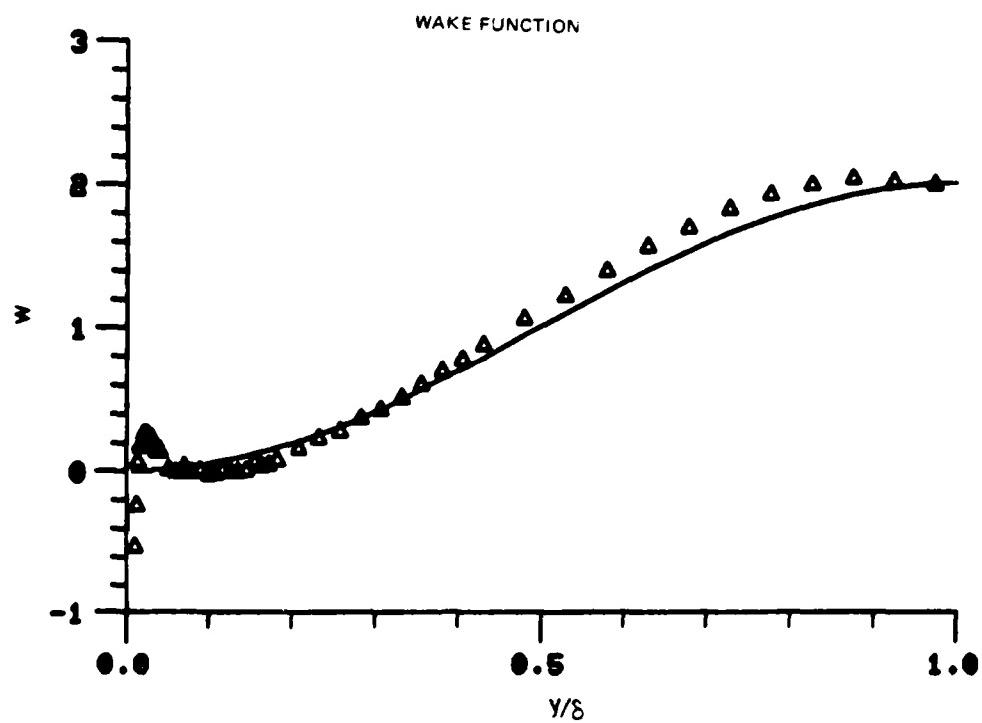


Figure 9. Boundary Layer Velocity Profiles
Run No. 5 Point No. 13

78-12-100-2

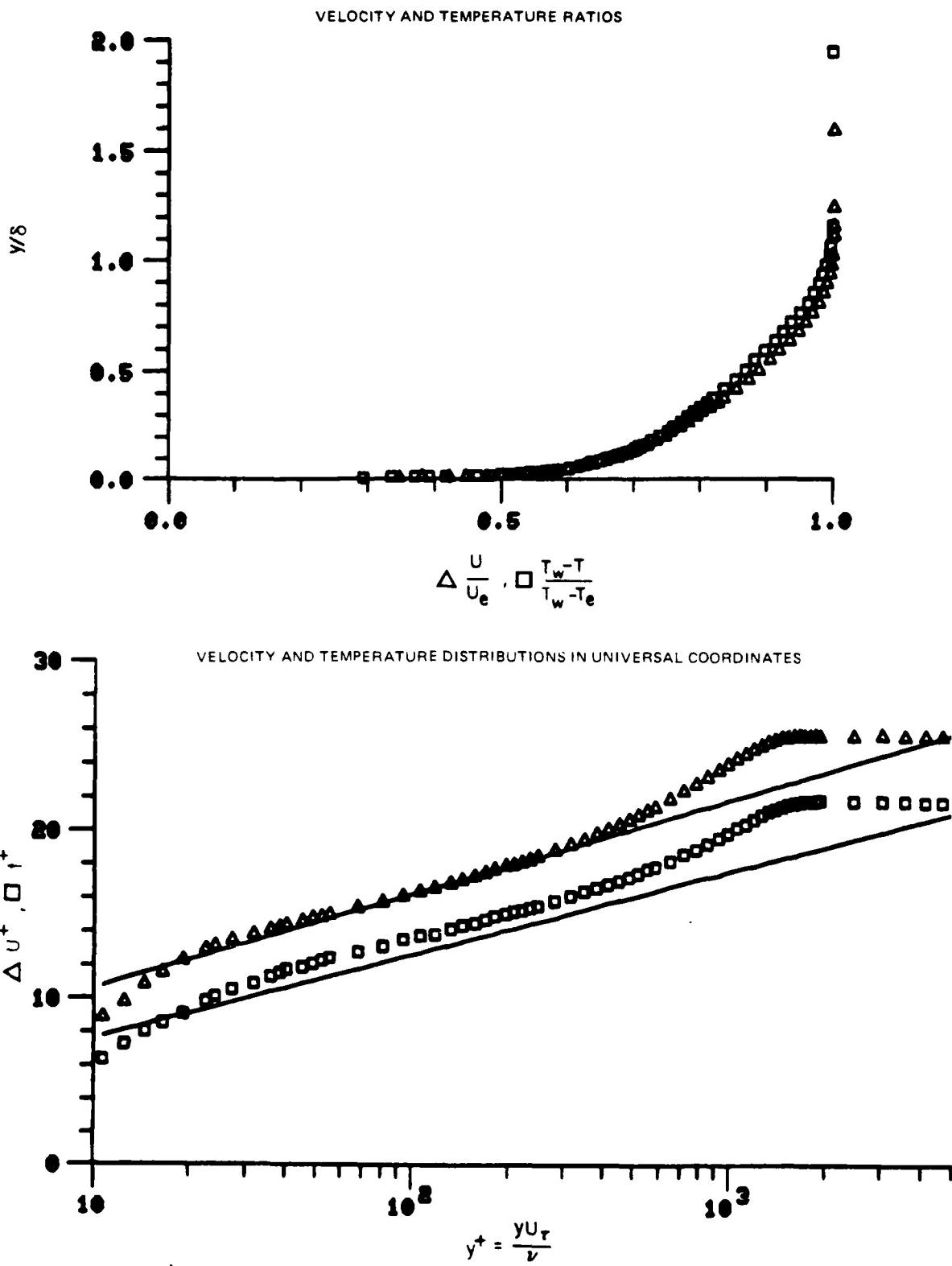


Figure 10. Boundary Layer Velocity and Temperature Profiles
Run No. 5 Point No. 14

78-12-100-1

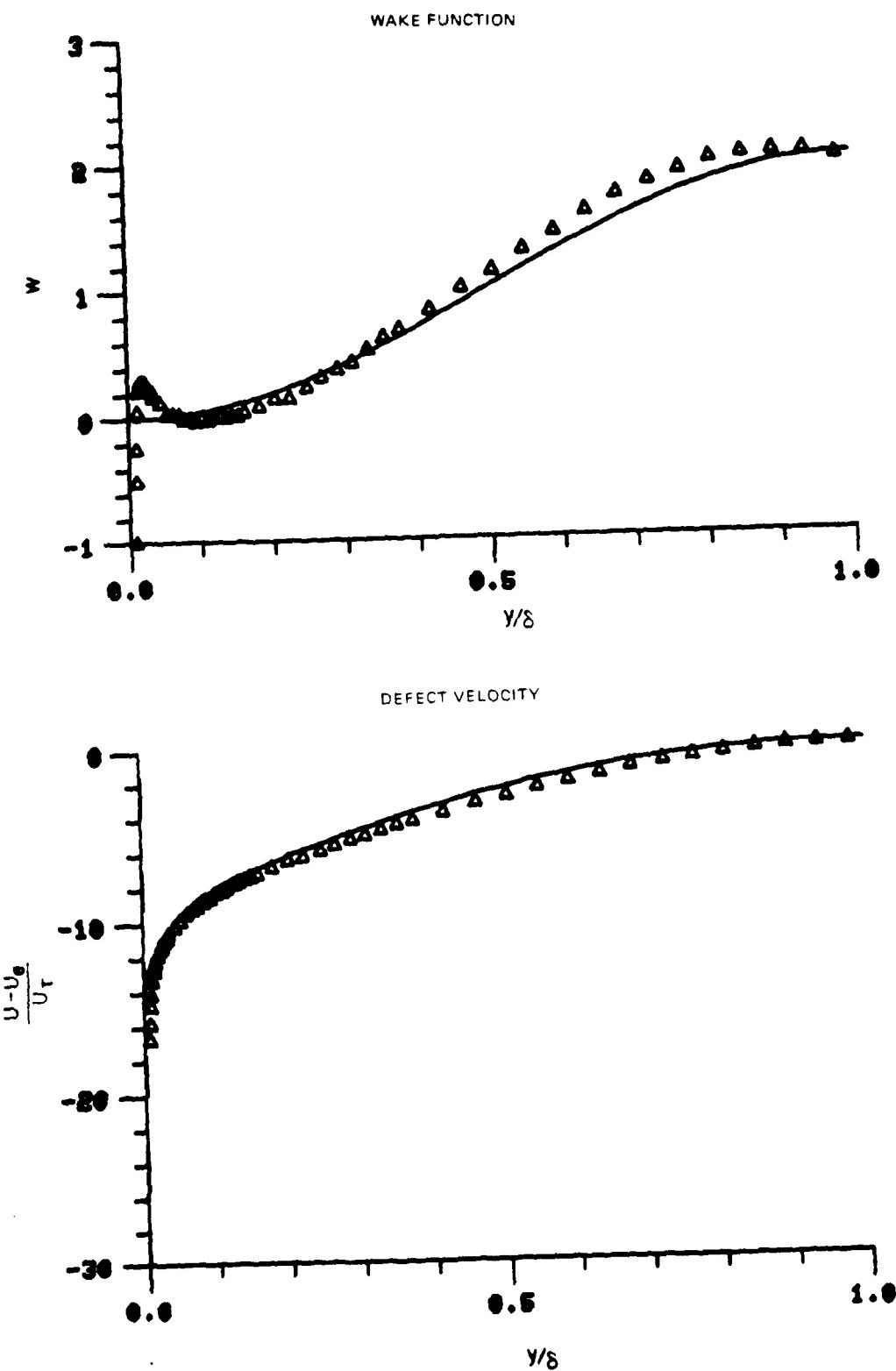


Figure 10. Boundary Layer Velocity Profiles
Run No. 5 Point No. 14

78-12-100-2

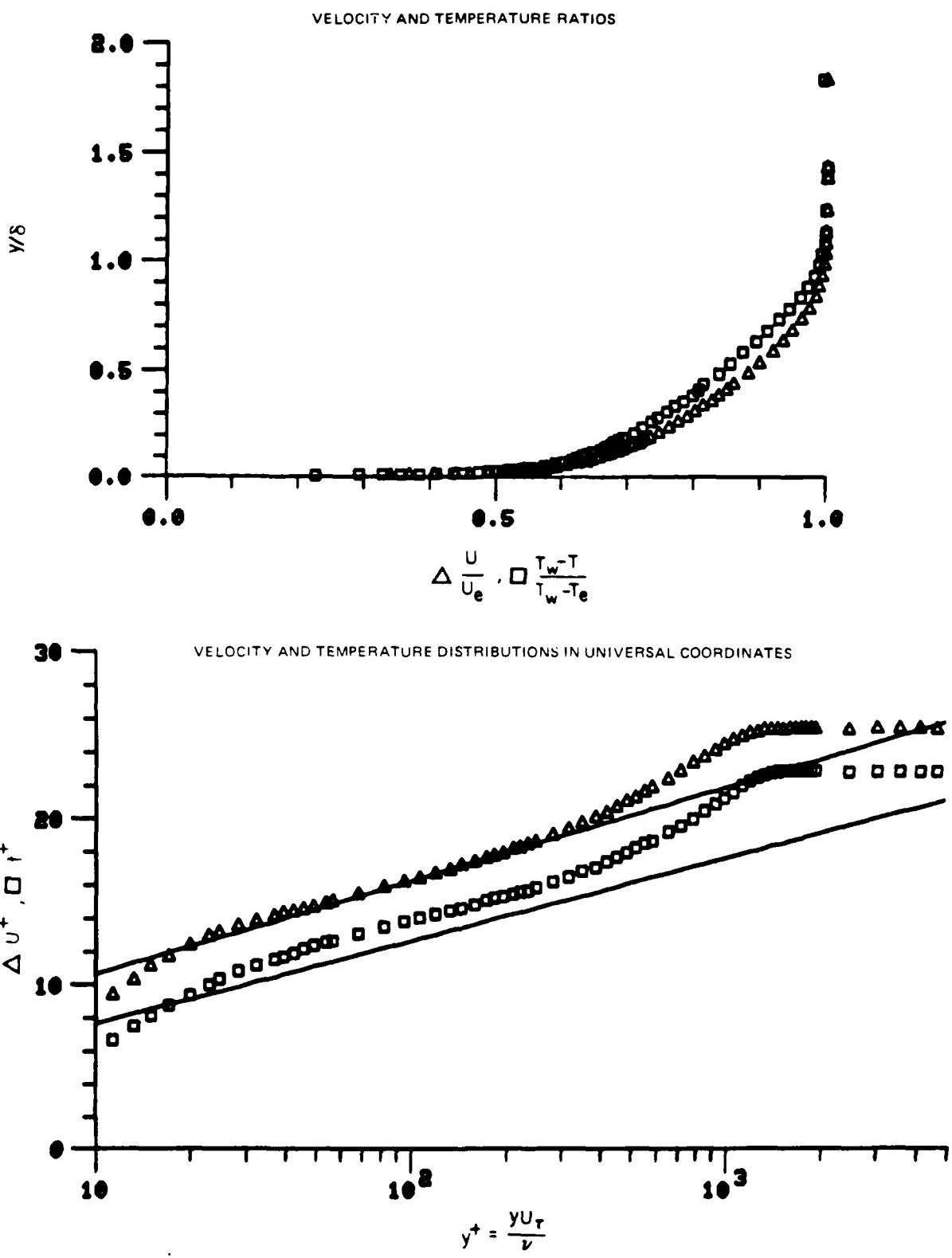


Figure 11. Boundary Layer Velocity and Temperature Profiles
Run No. 5 Point No. 16

78-12-100-1

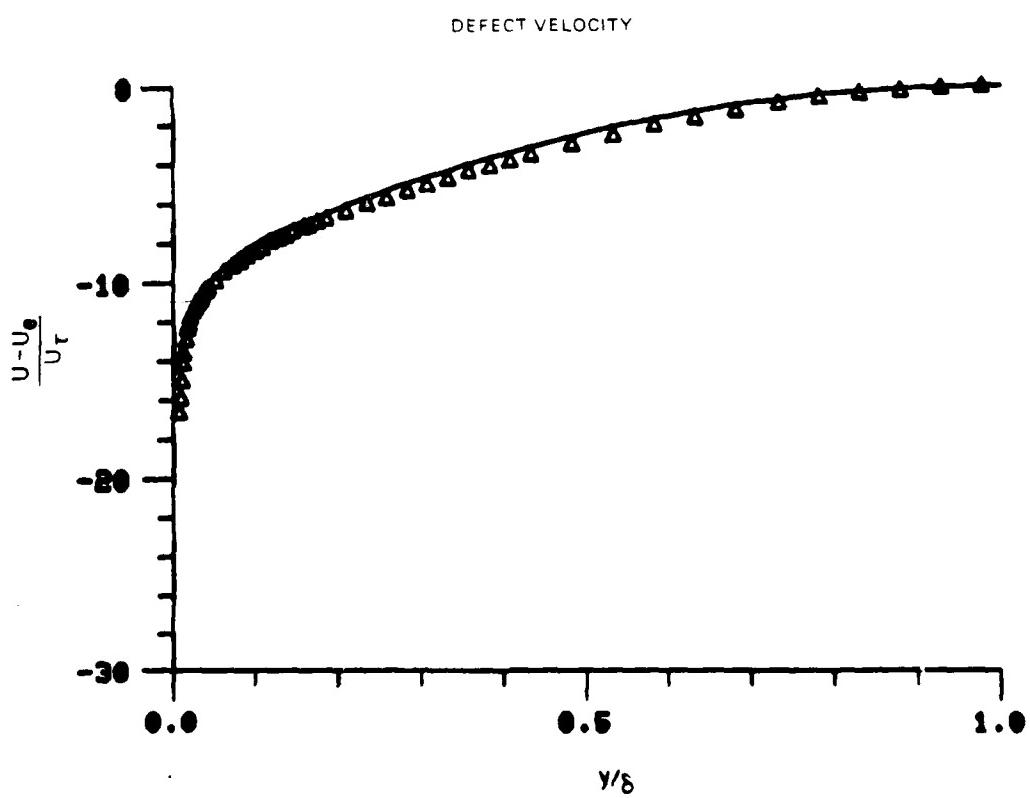
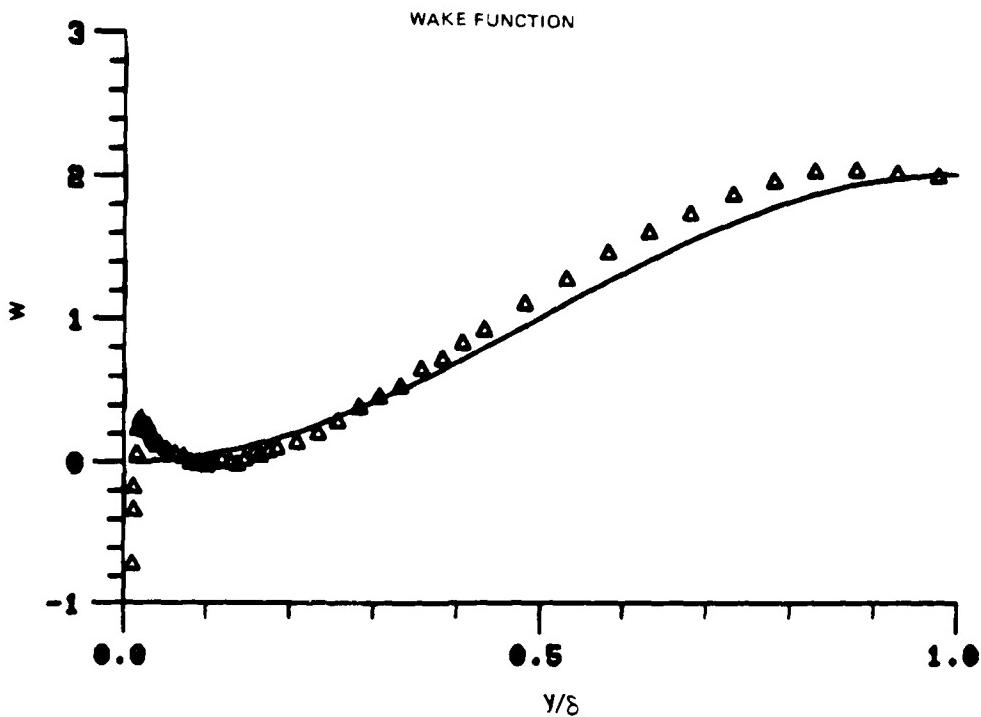


Figure 11. Boundary Layer Velocities at $y/\delta = 1.0$
Part 2. (Continued)

AD-A101 095 UNITED TECHNOLOGIES RESEARCH CENTER EAST HARTFORD CONN F/G 20/4
DATA REPORT, VOLUME I, VELOCITY AND TEMPERATURE PROFILE DATA FO-ETC(1)
JAN 81 M F BLAIR F49620-78-C-0064
UNCLASSIFIED UTRC/R81-914388-15 AFOSR-TR-81-0516 NL

3 of 4
AD
A10095

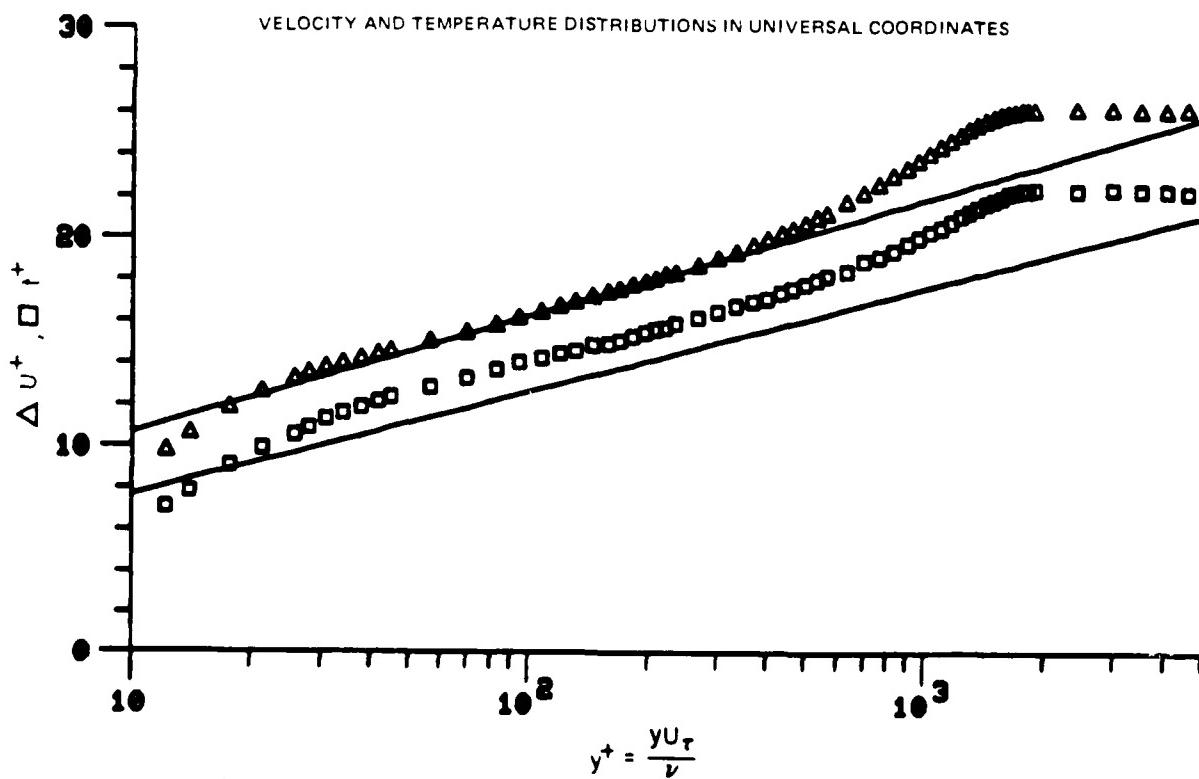
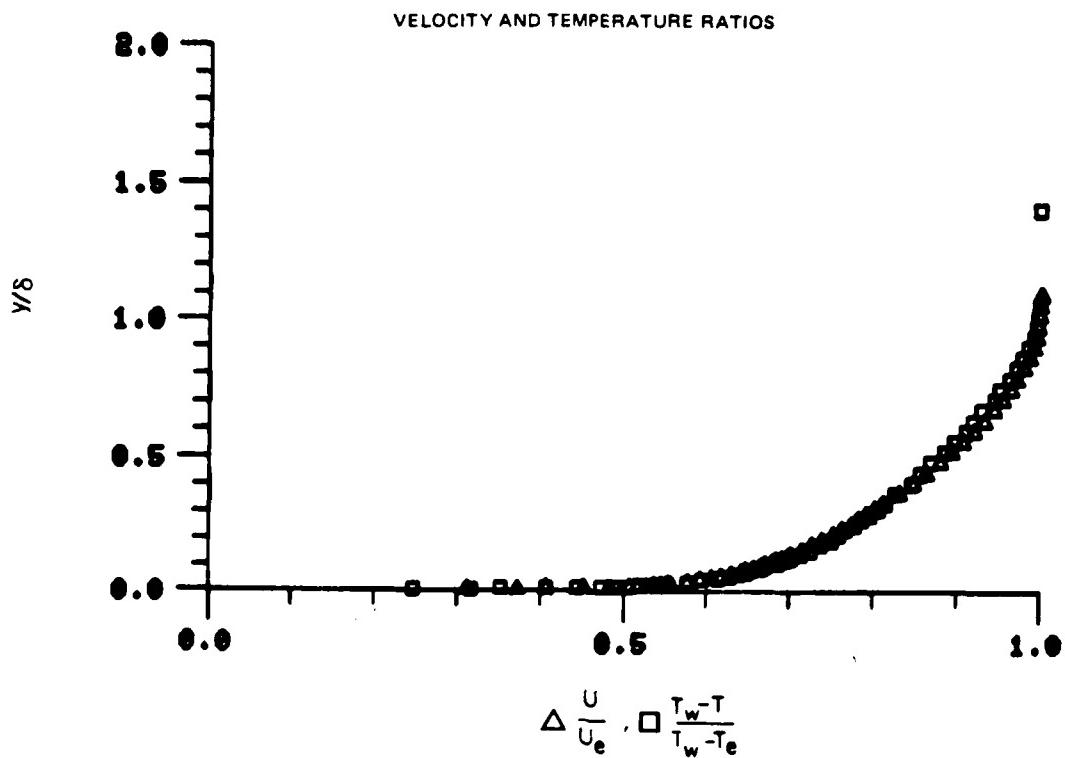


Figure 12. Boundary Layer Velocity and Temperature Profiles
Run No. 5 Point No. 17

78-12-100-1

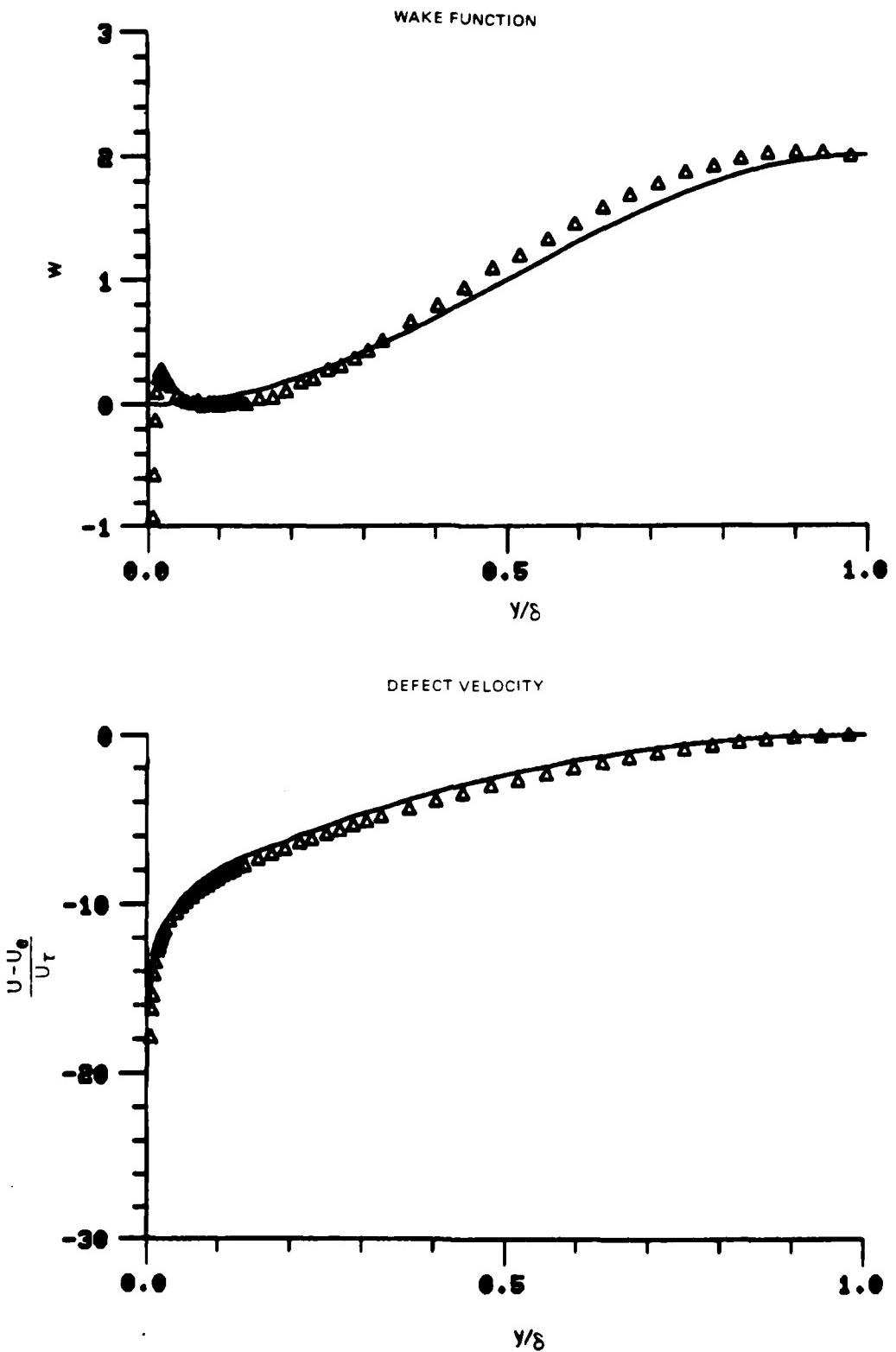


Figure 12. Boundary Layer Velocity Profiles
Run No. 5 Point No. 17

78-12-100-2

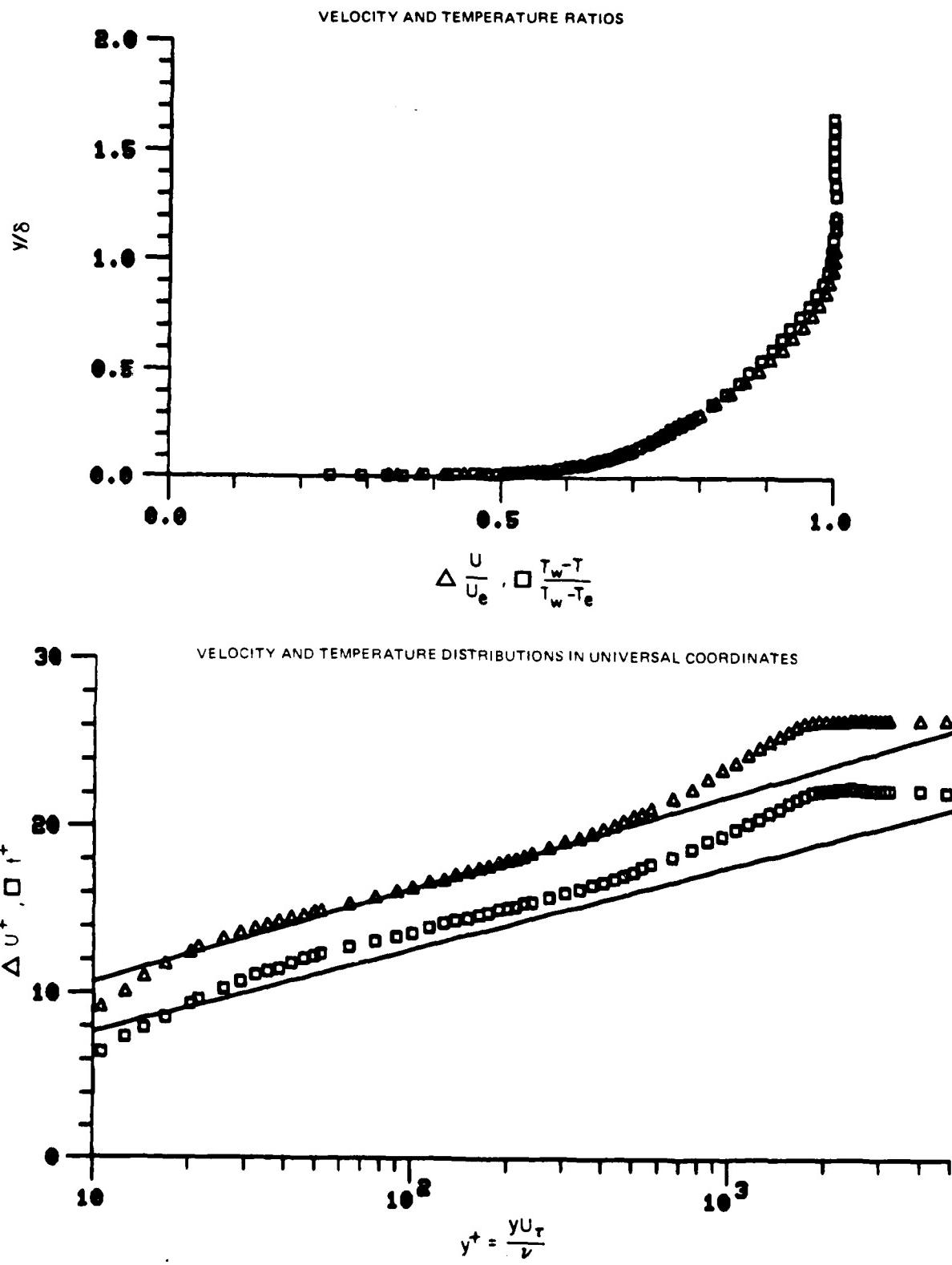


Figure 13. Boundary Layer Velocity and Temperature Profiles
Run No. 5 Point No. 18

78-12-100-1

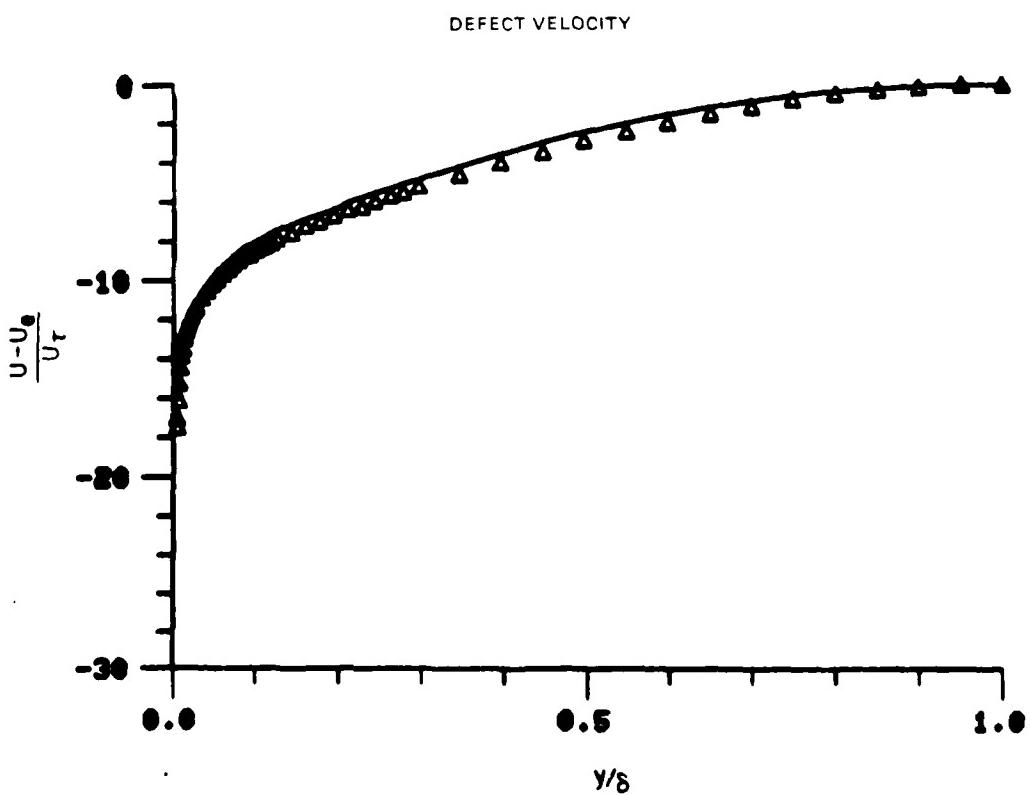
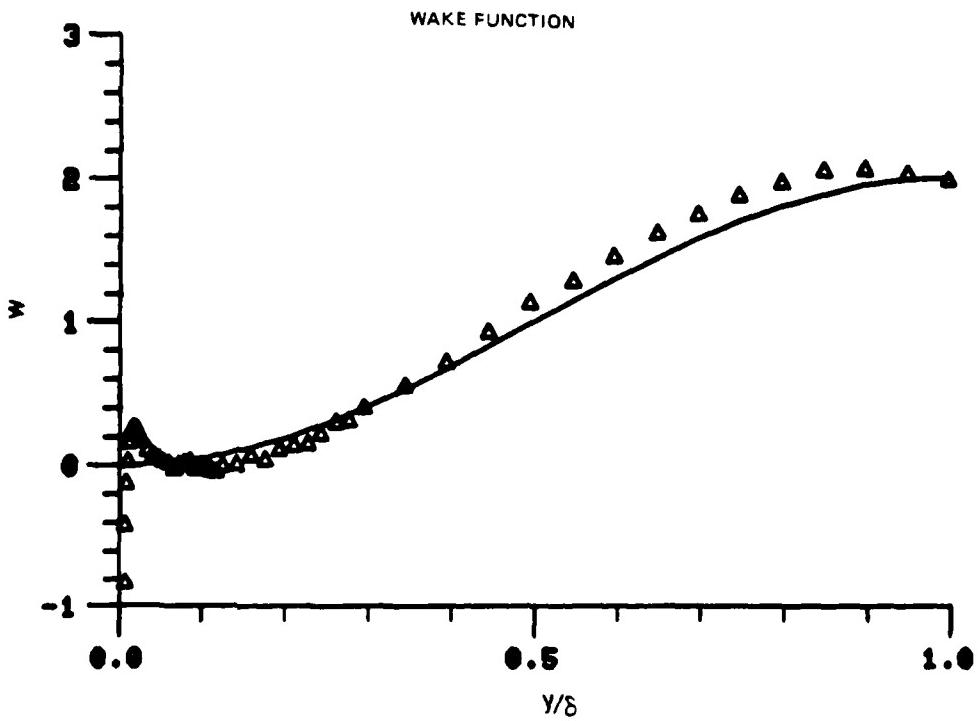


Figure 13. Boundary Layer Velocity Profiles
Run No. 5 Point No. 18

78-12-100-2

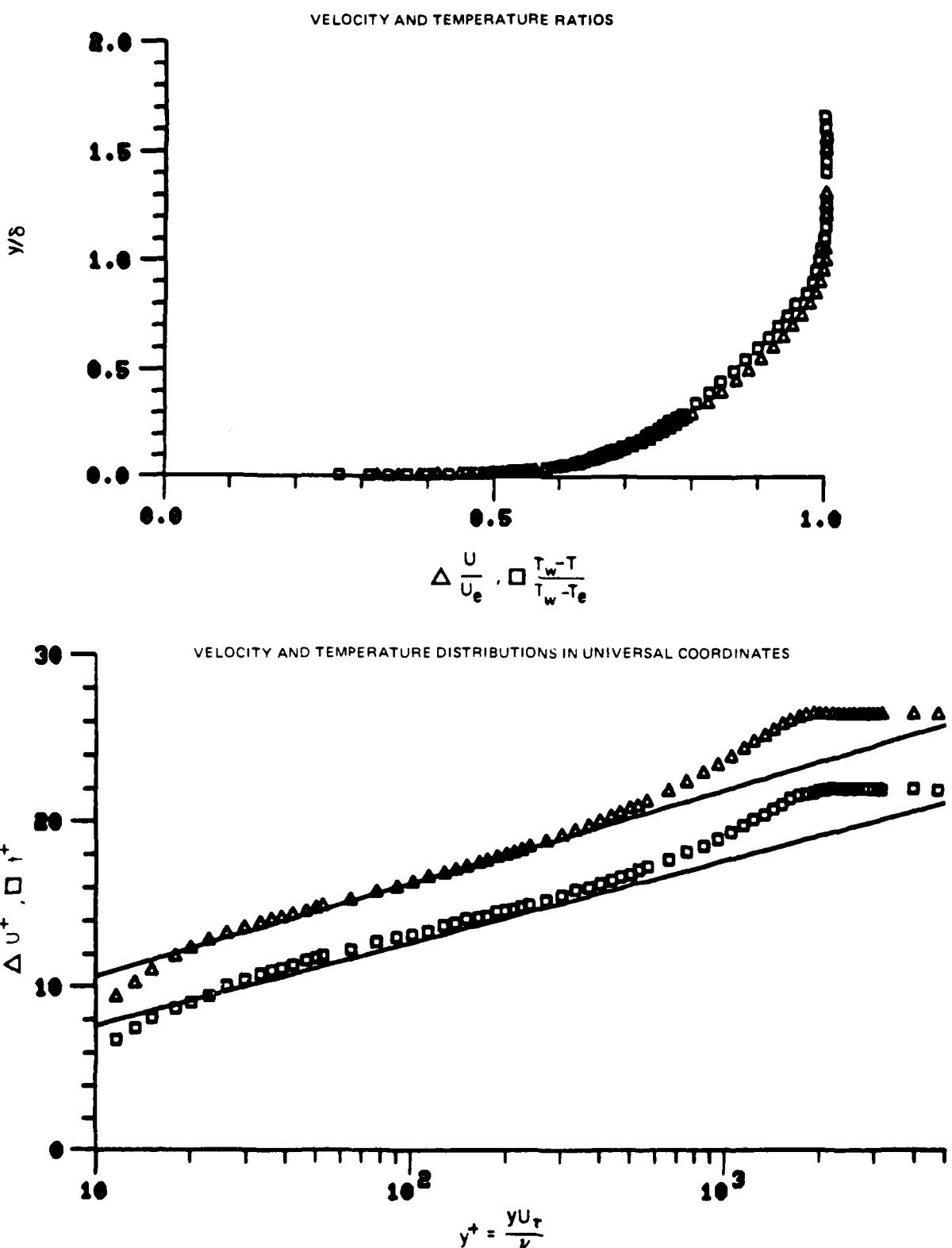


Figure 14. Boundary Layer Velocity and Temperature Profiles
Run No. 5 Point No. 19

78-12-100-1

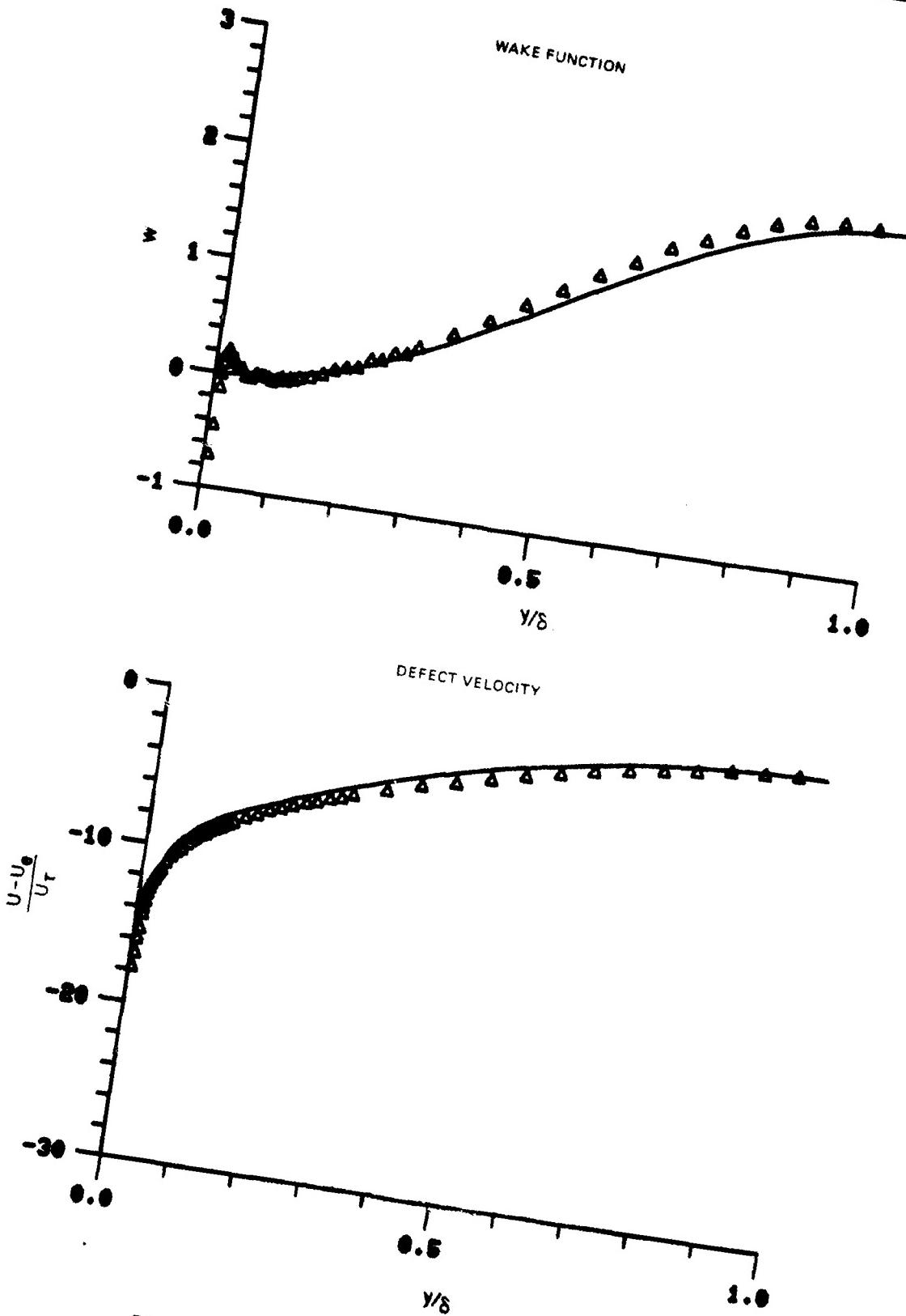


Figure 14. Boundary Layer Velocity Profiles
Run No. 5 Point No. 19

78-12-100-2

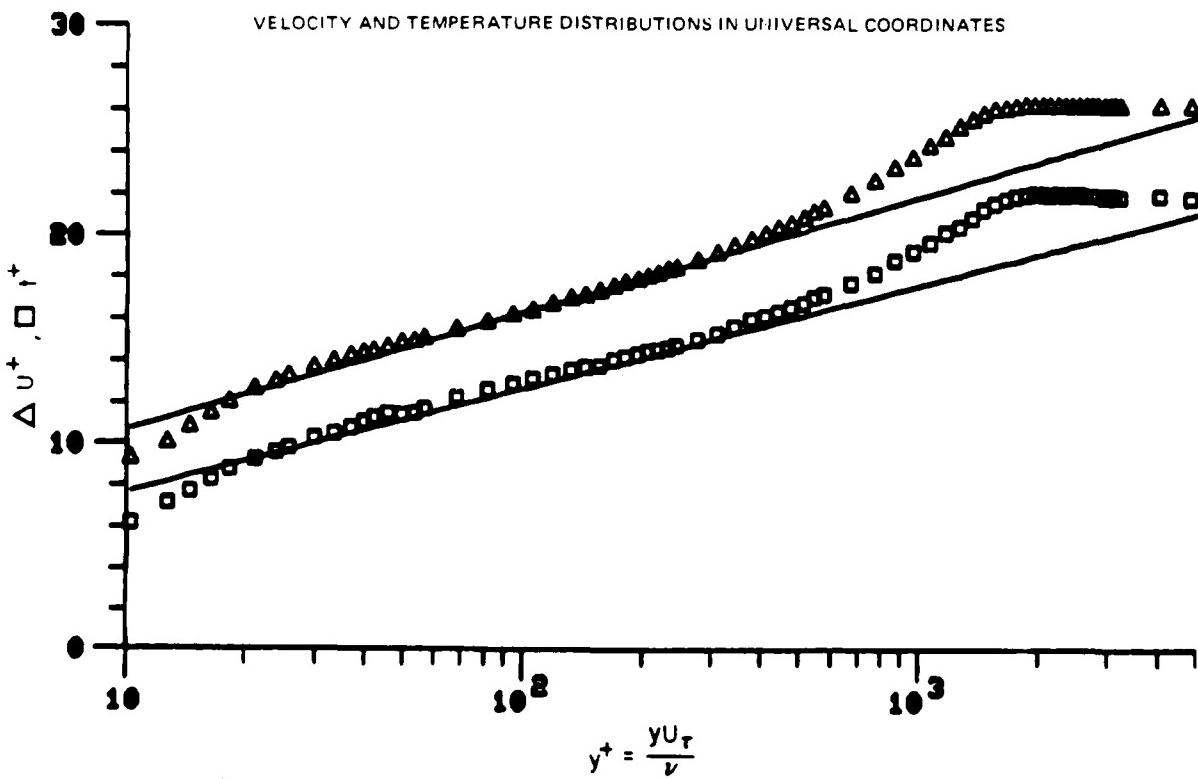
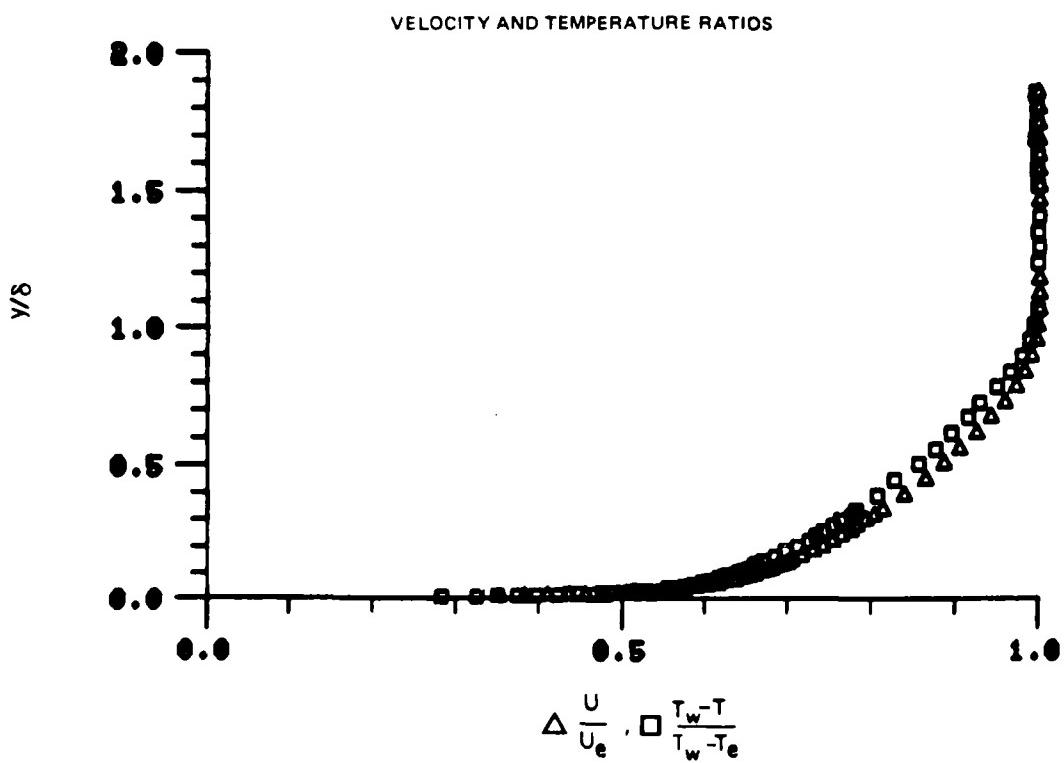


Figure 15. Boundary Layer Velocity and Temperature Profiles
Run No. 5 Point No. 20

78-12-100-1

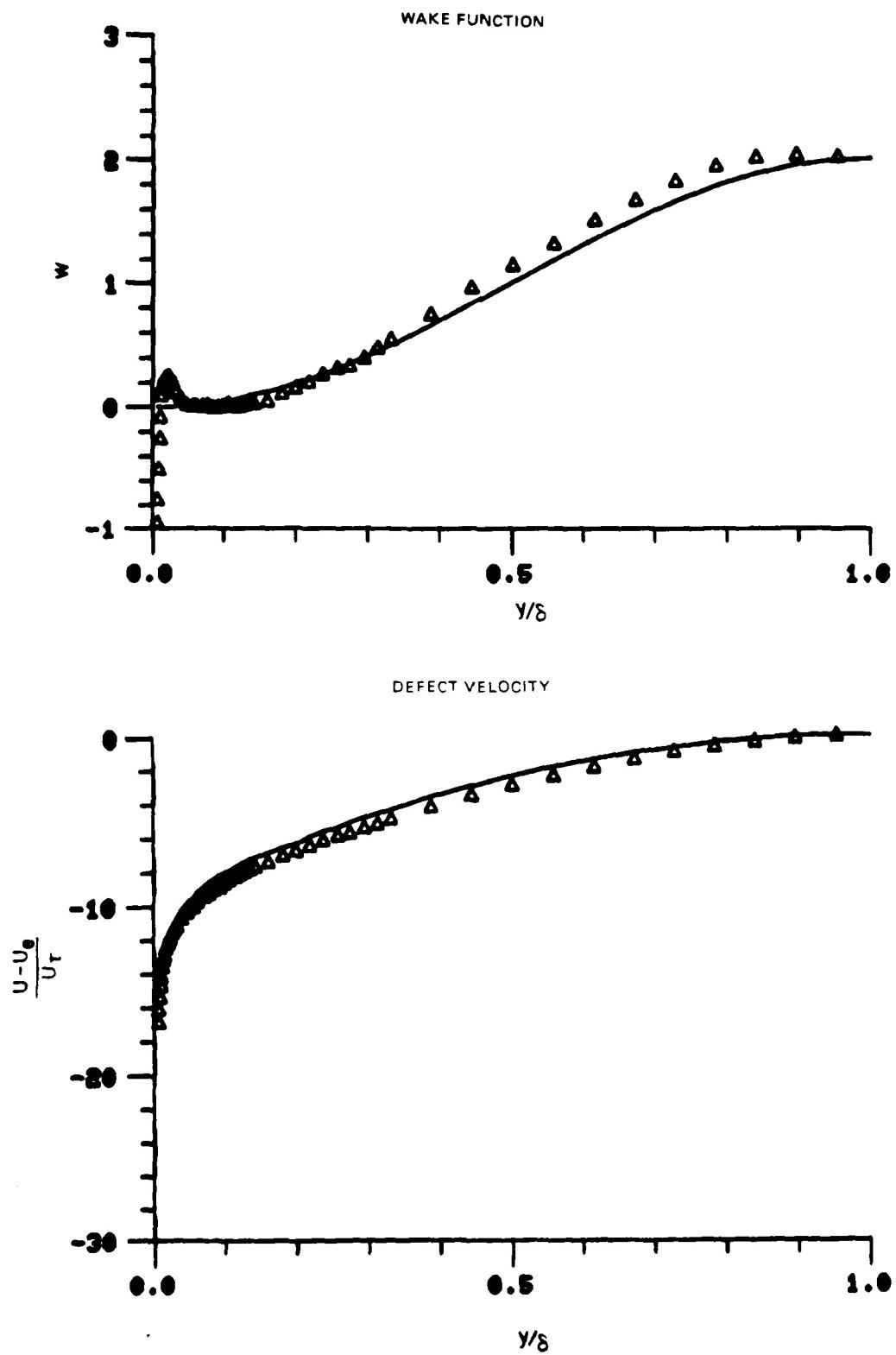


Figure 15. Boundary Layer Velocity Profiles
Run No. 5 Point No. 20

78-12-100-2

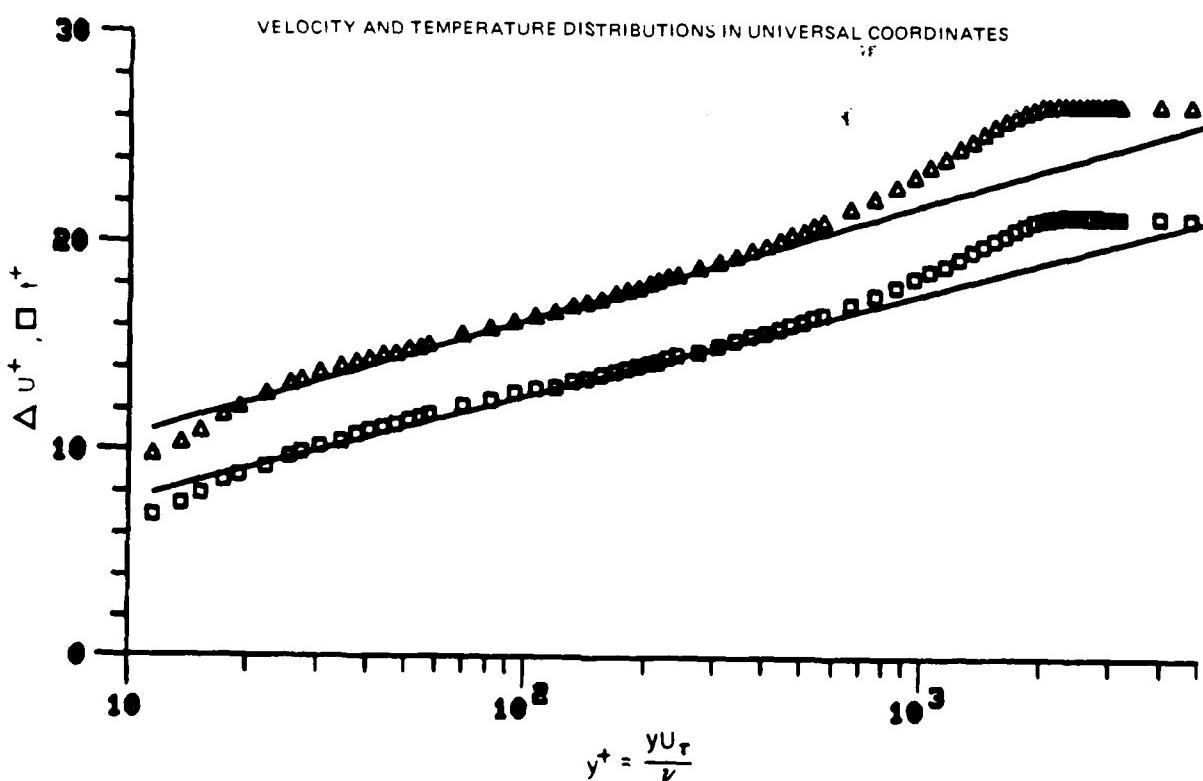
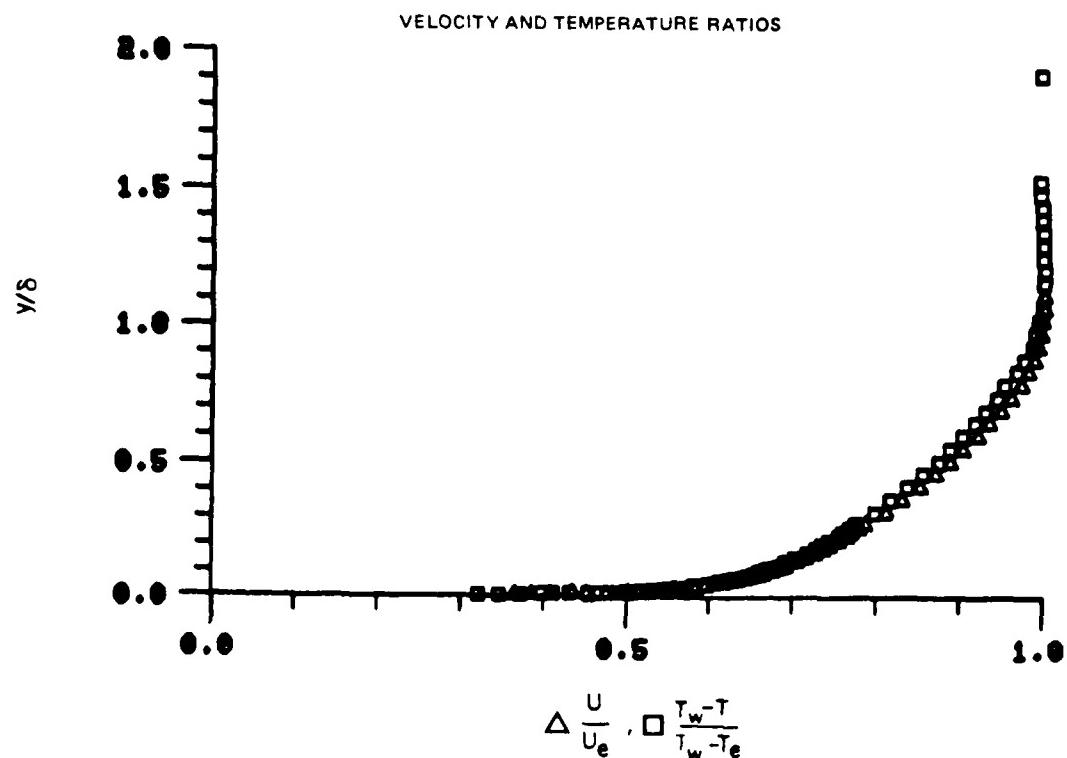


Figure 16. Boundary Layer Velocity and Temperature Profiles
Run No. 5 Point No. 21

78-12-100-1

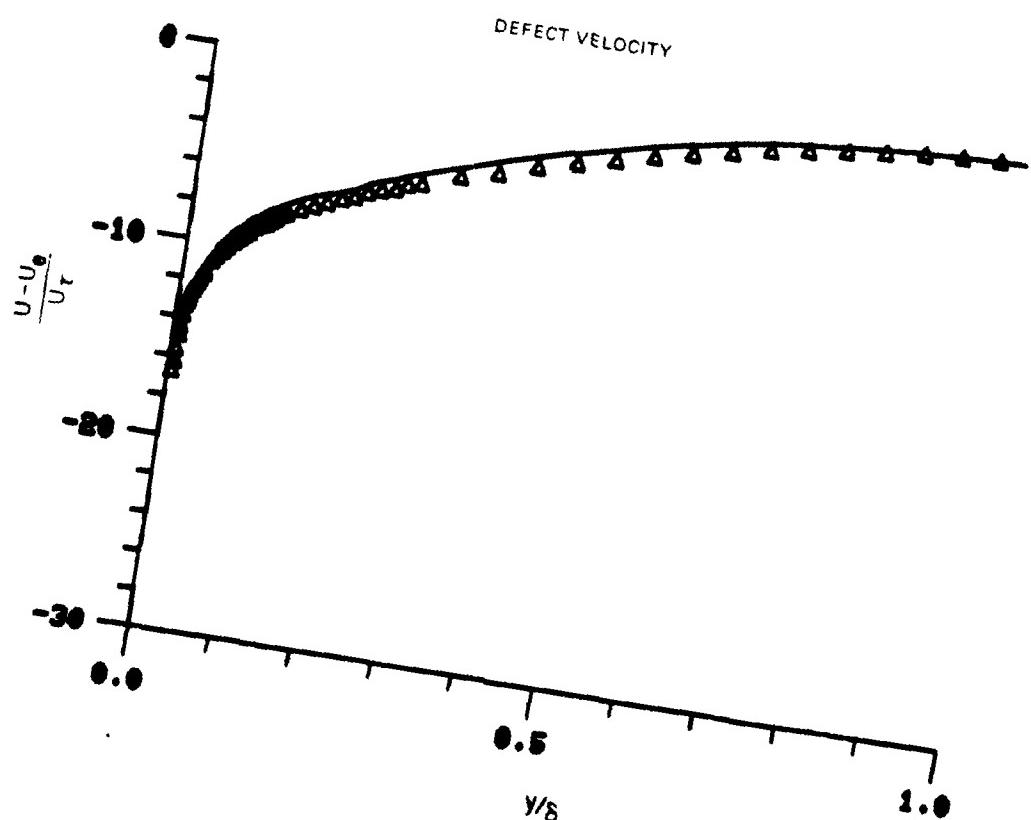
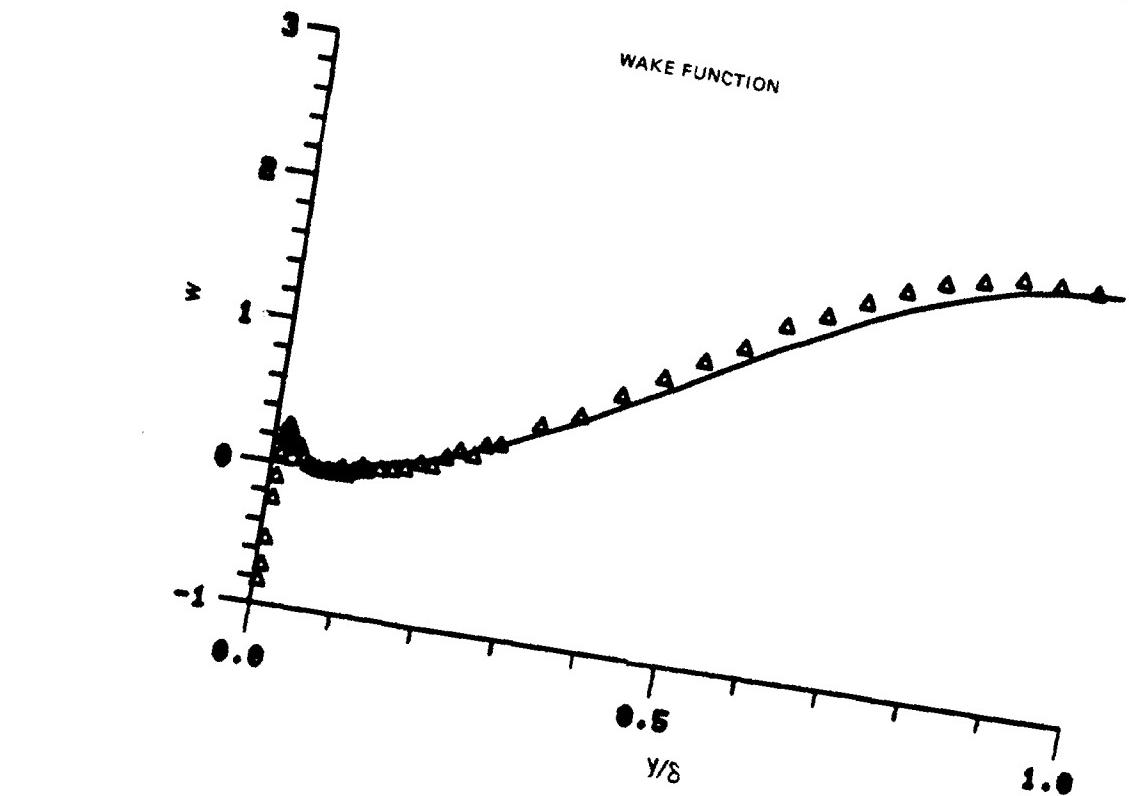


Figure 16. Boundary Layer Velocity Profiles
Run No. 5 Point No. 21

7B-12-100-2

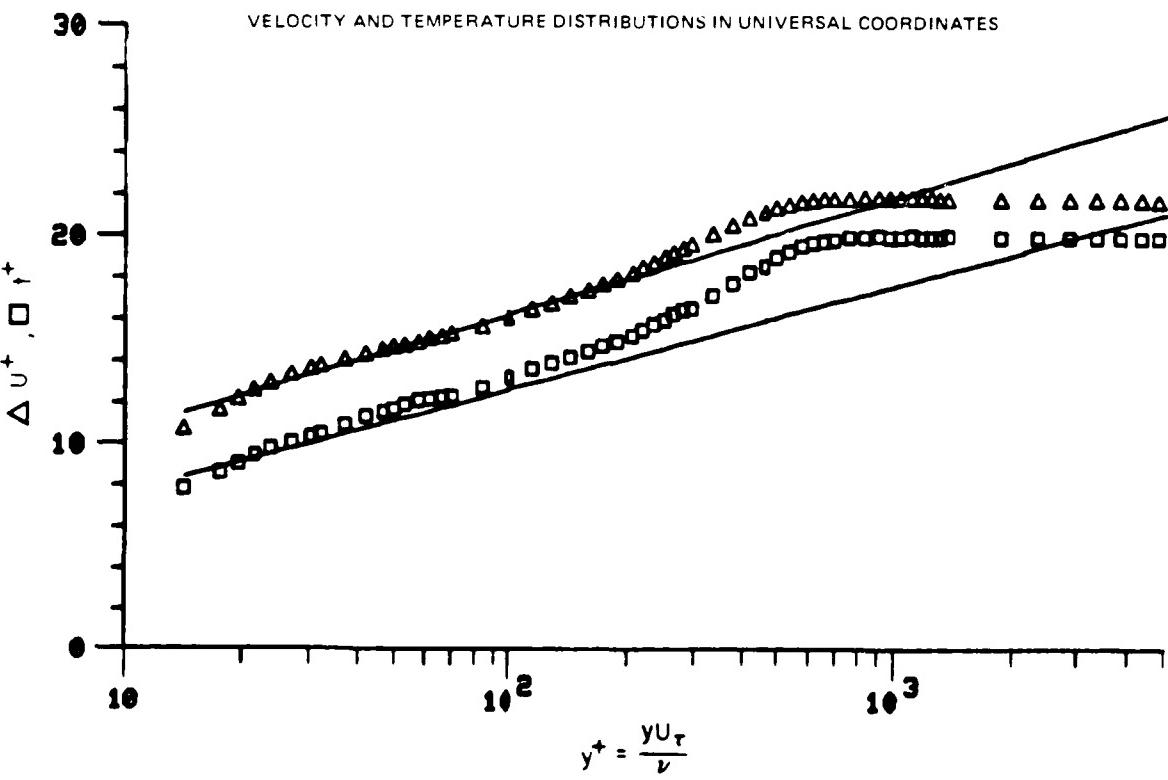
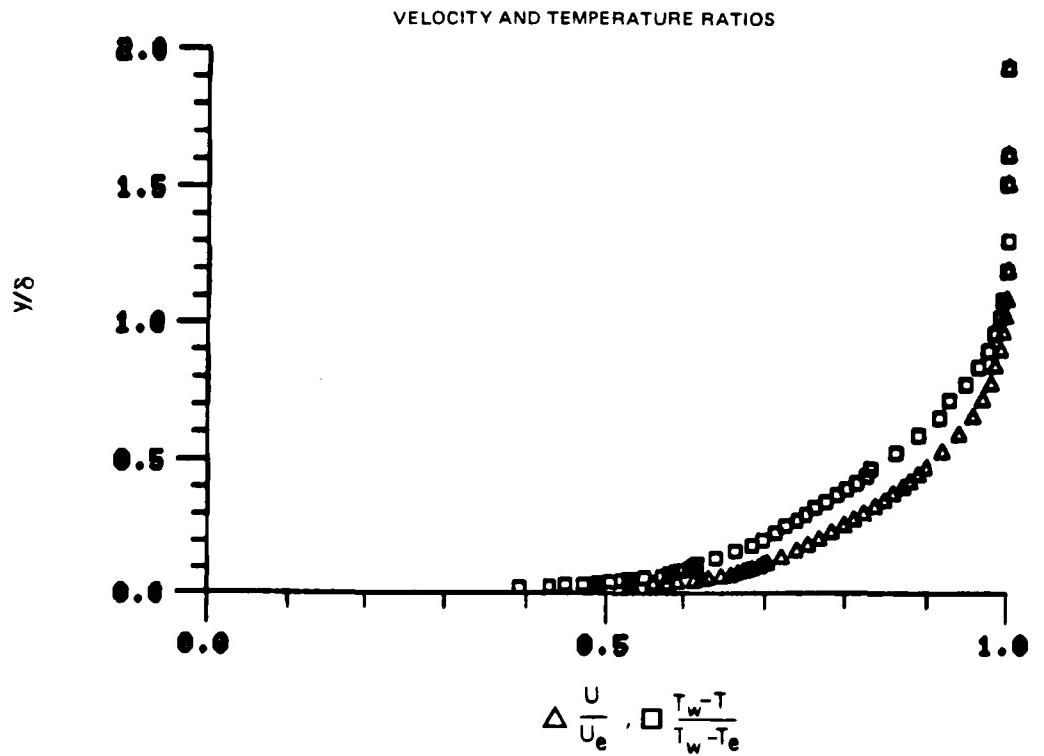


Figure 17. Boundary Layer Velocity and Temperature Profiles
Run No. 8 Point No. 3

78-12-100-1

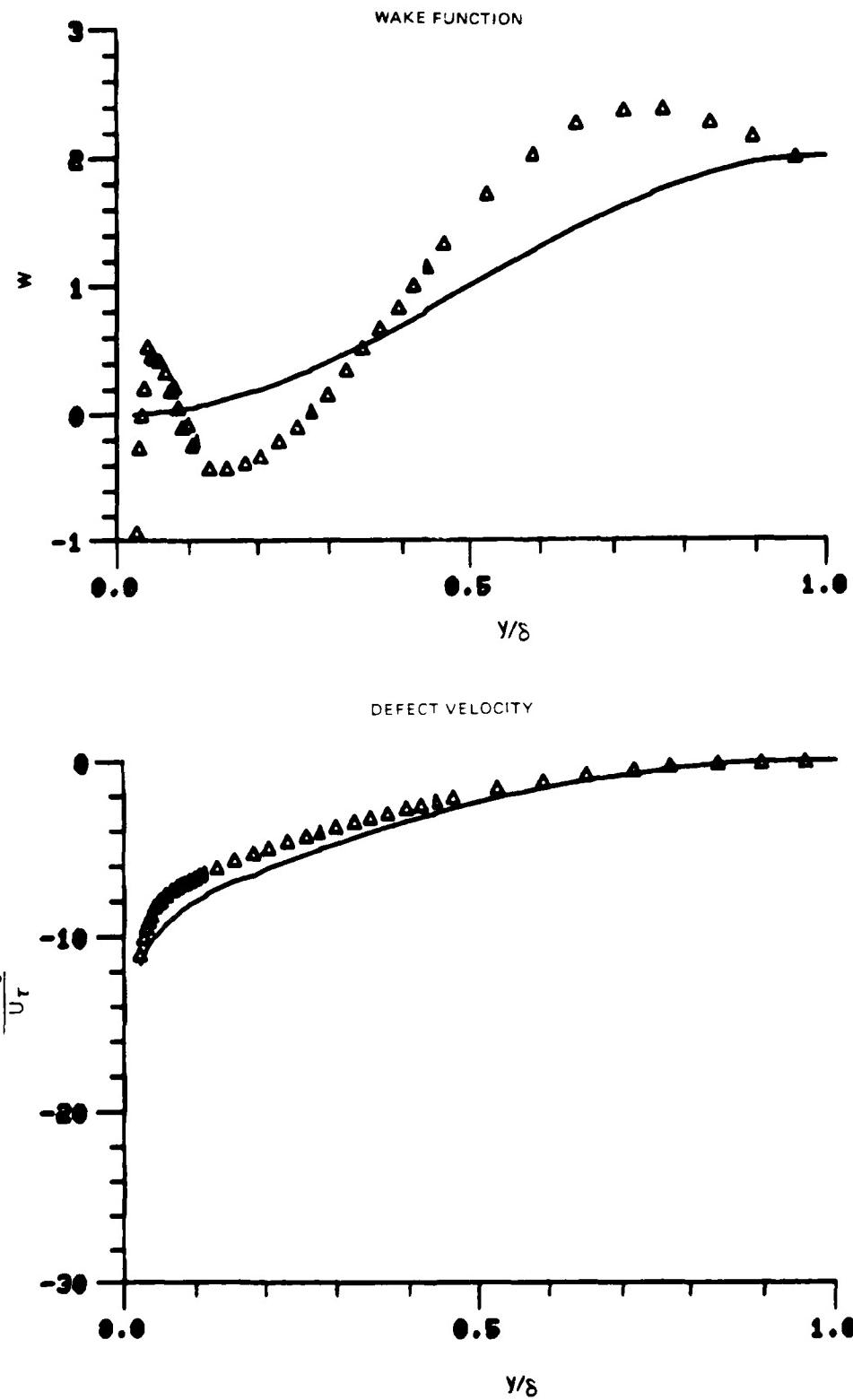


Figure 17. Boundary Layer Velocity Profiles
Run No. 8 Point No. 3

78-12-100-2

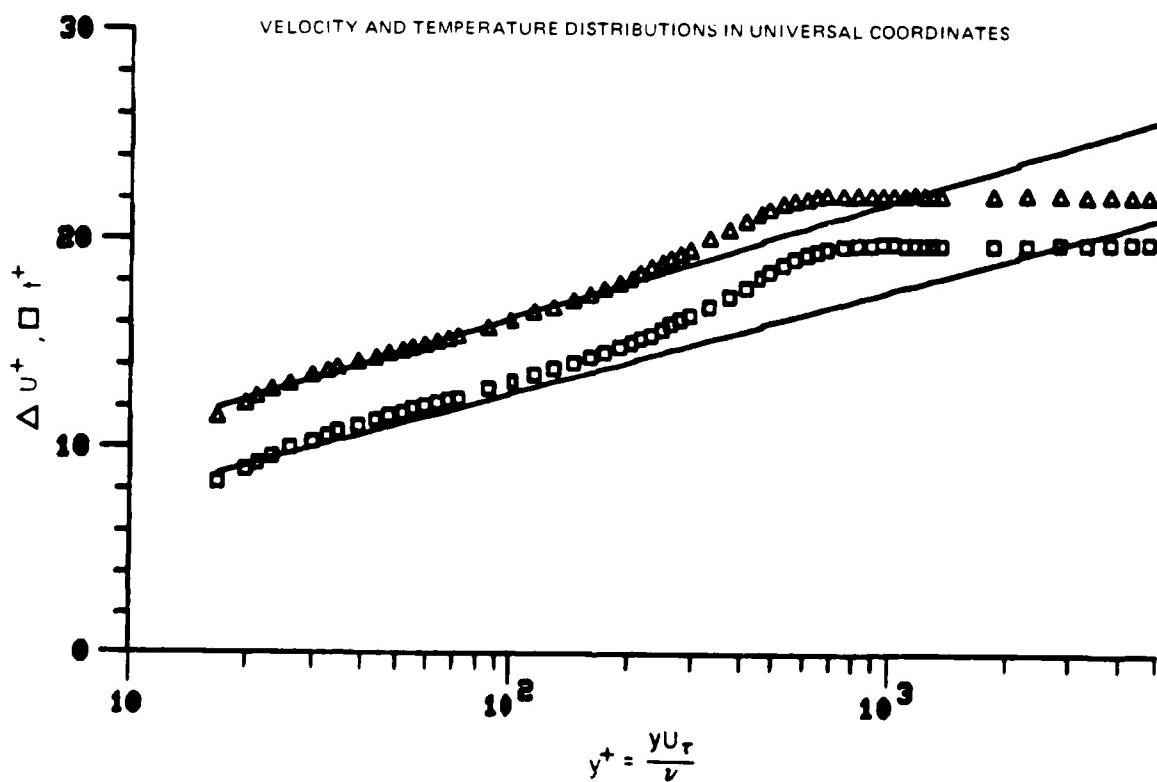
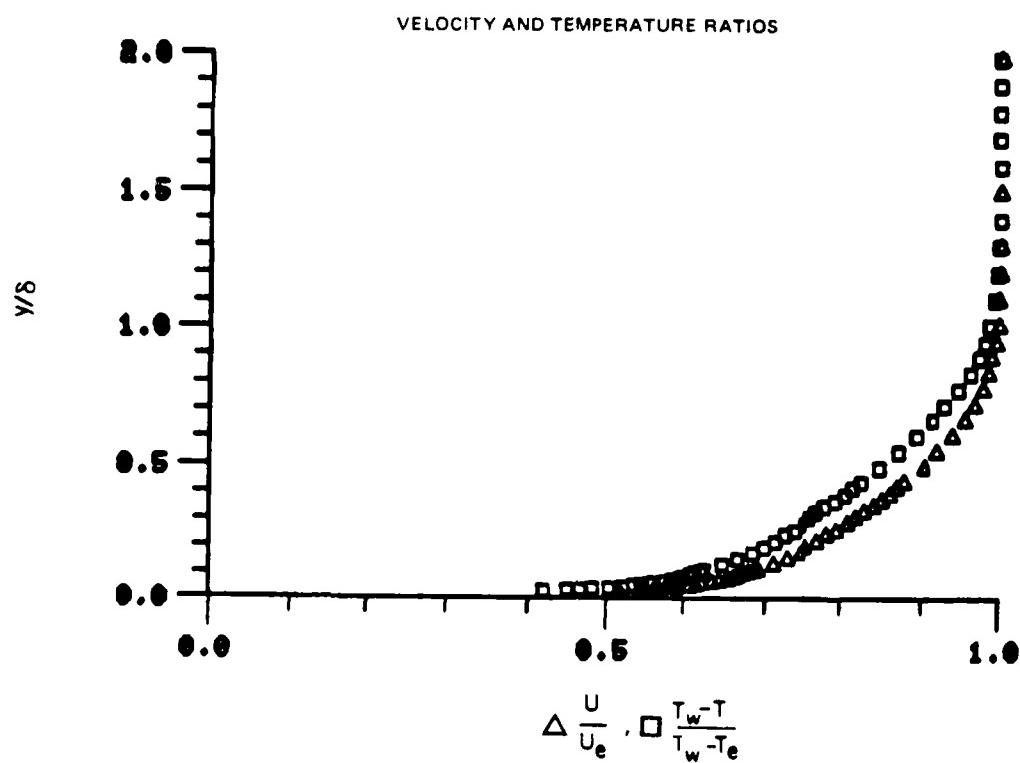


Figure 18. Boundary Layer Velocity and Temperature Profiles
Run No. 8 Point No. 4

78-12-100-1

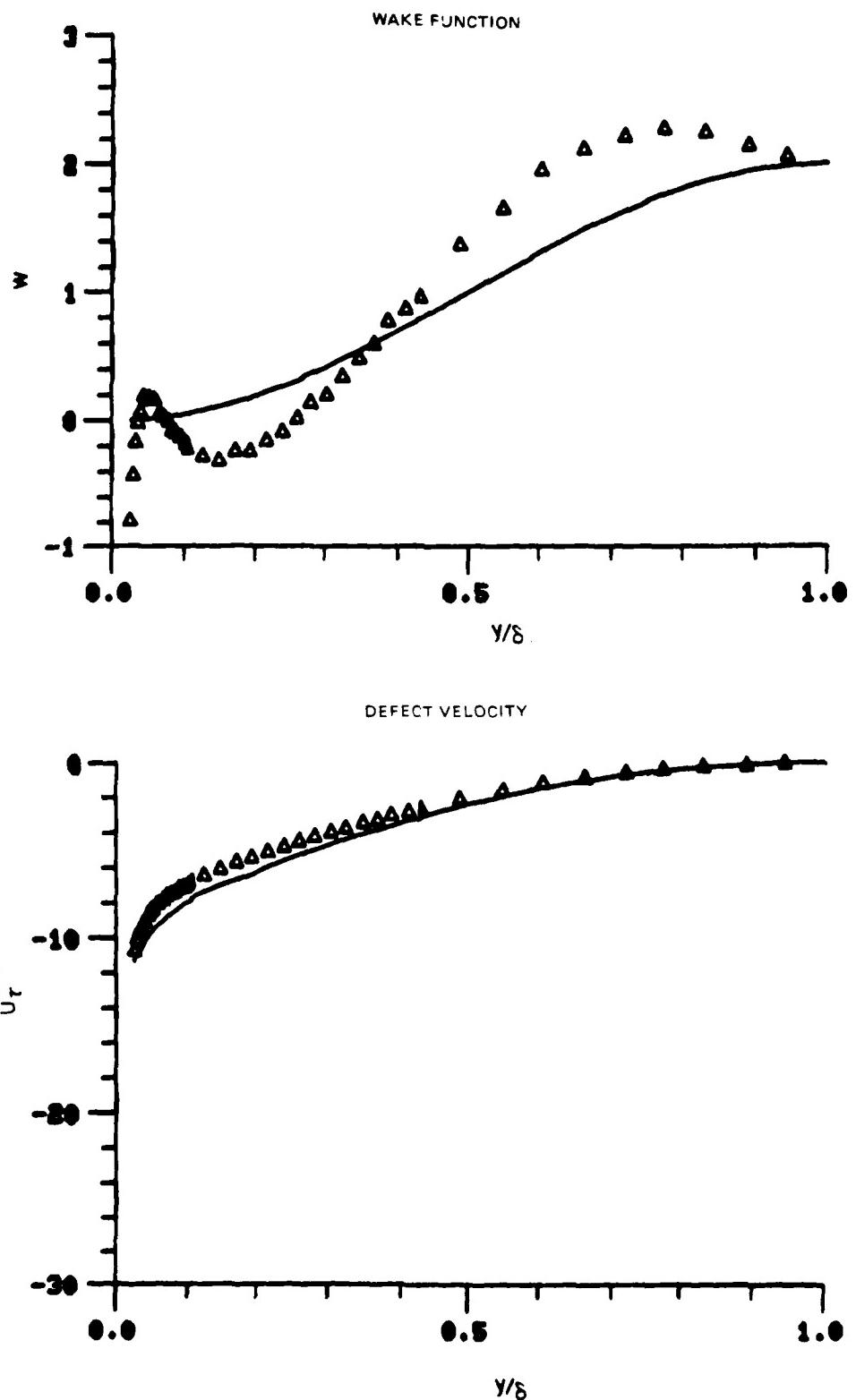


Figure 18. Boundary Layer Velocity Profiles
Run No. 8 Point No. 4

78-12-100-2

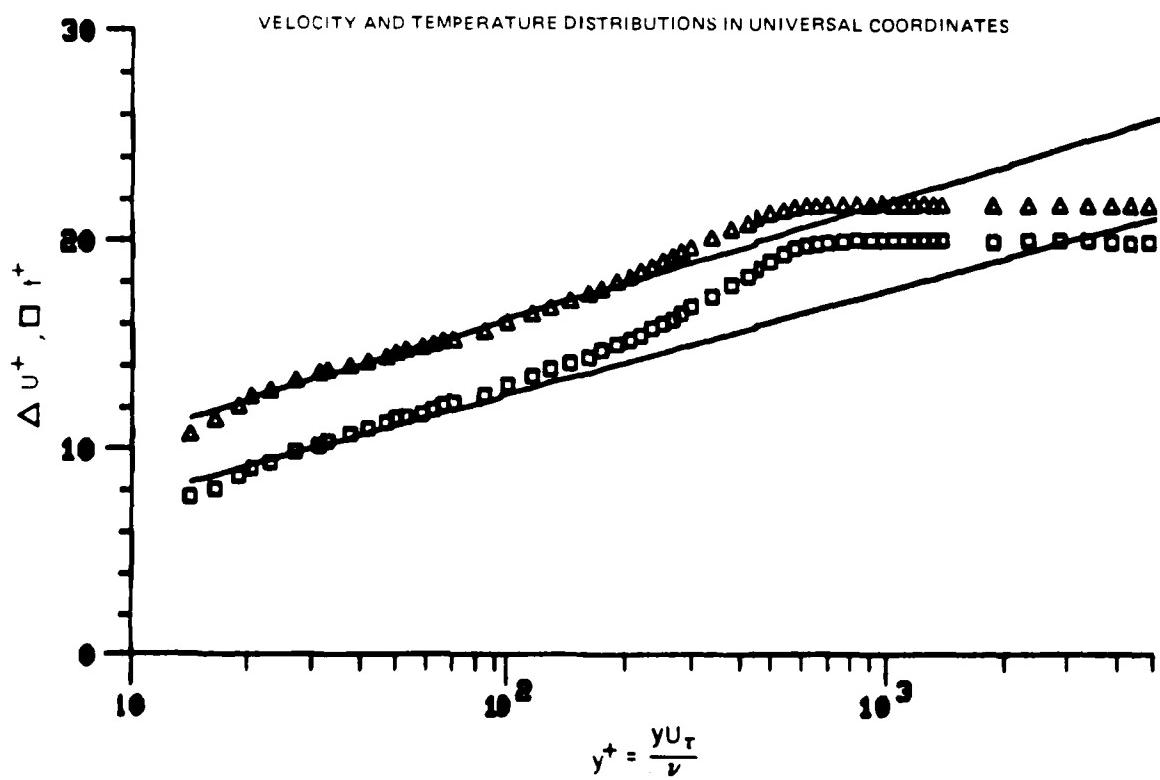
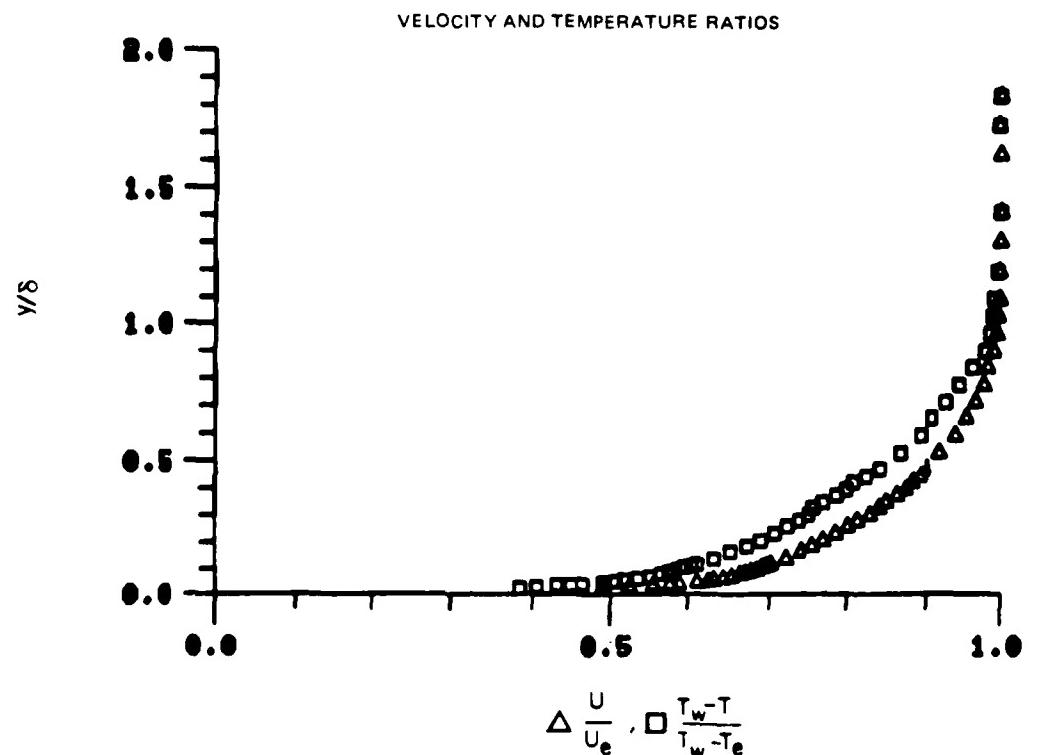


Figure 19. Boundary Layer Velocity and Temperature Profiles
Run No. 8 Point No. 5

78-12-100-1

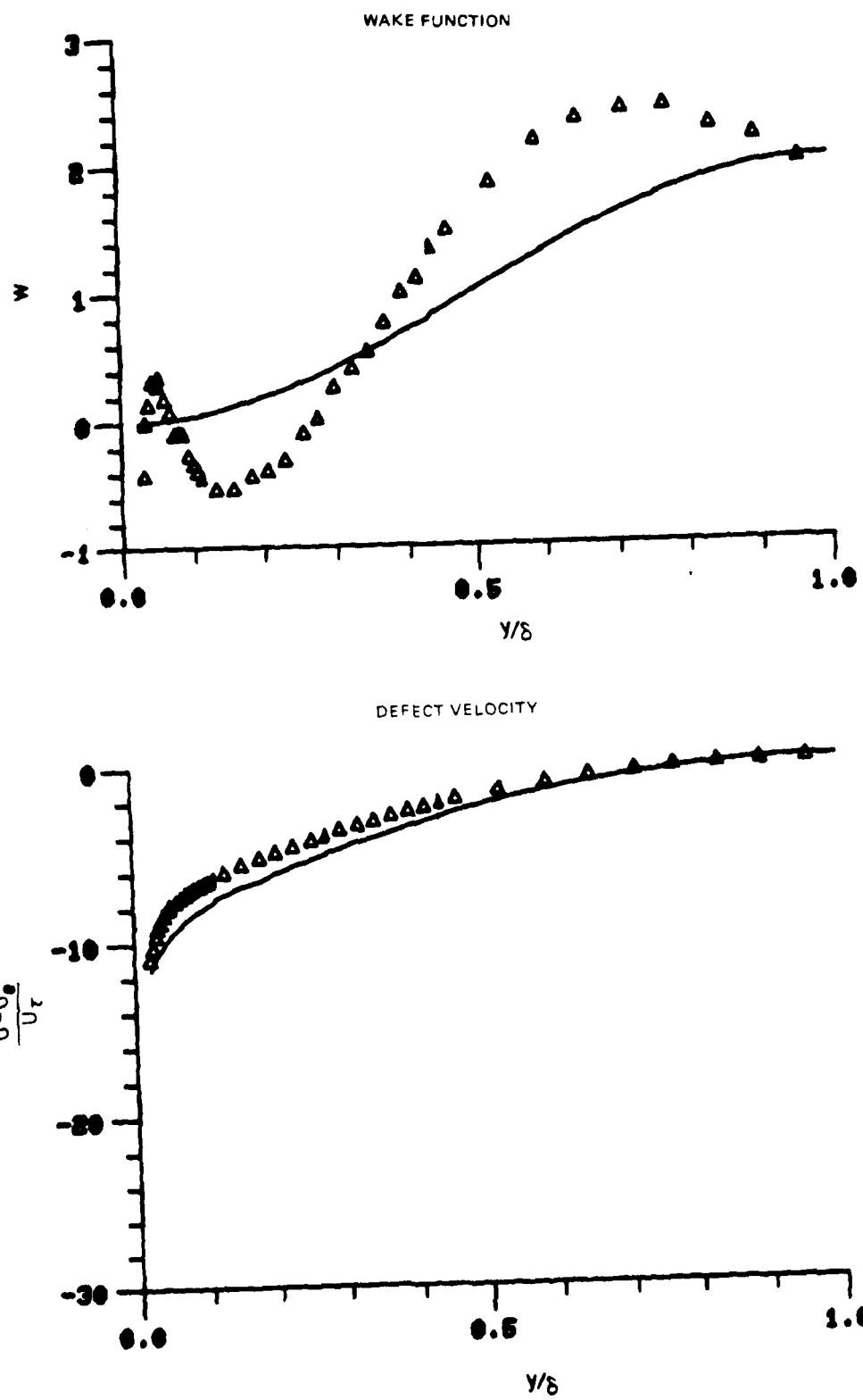


Figure 19. Boundary Layer Velocity Profiles
Run No. 8 Point No. 5

78-12-100-2

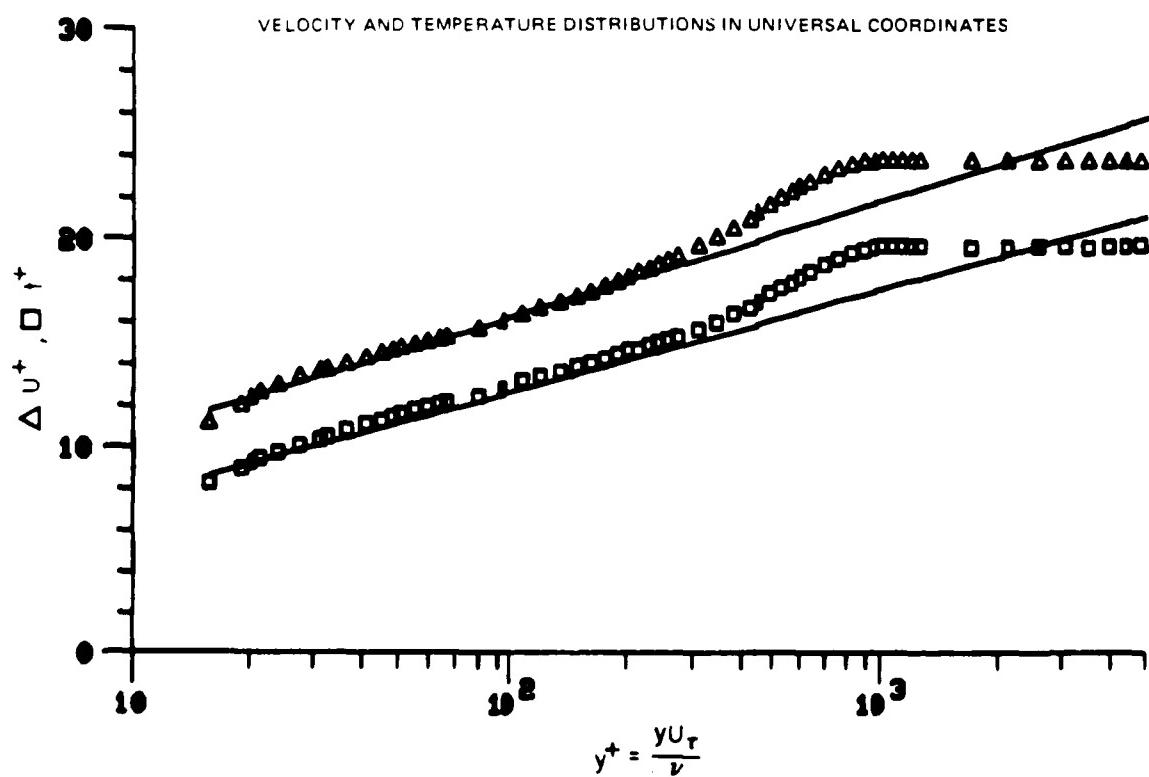
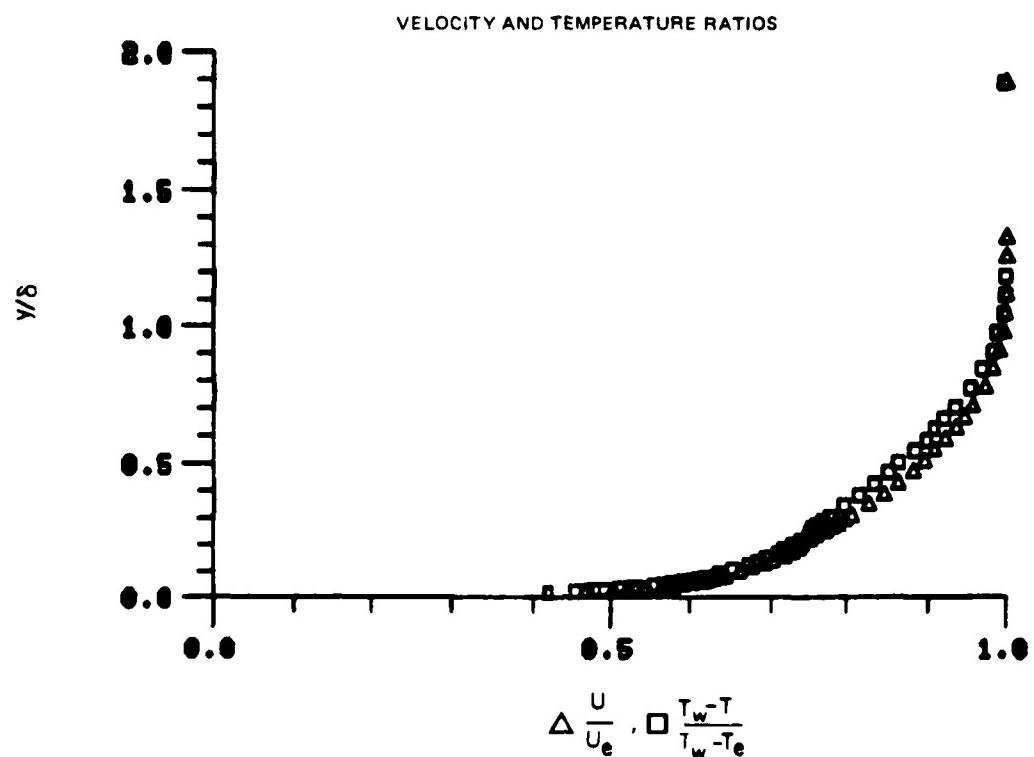


Figure 20. Boundary Layer Velocity and Temperature Profiles
Run No. 8 Point No. 7

78-12-100-1

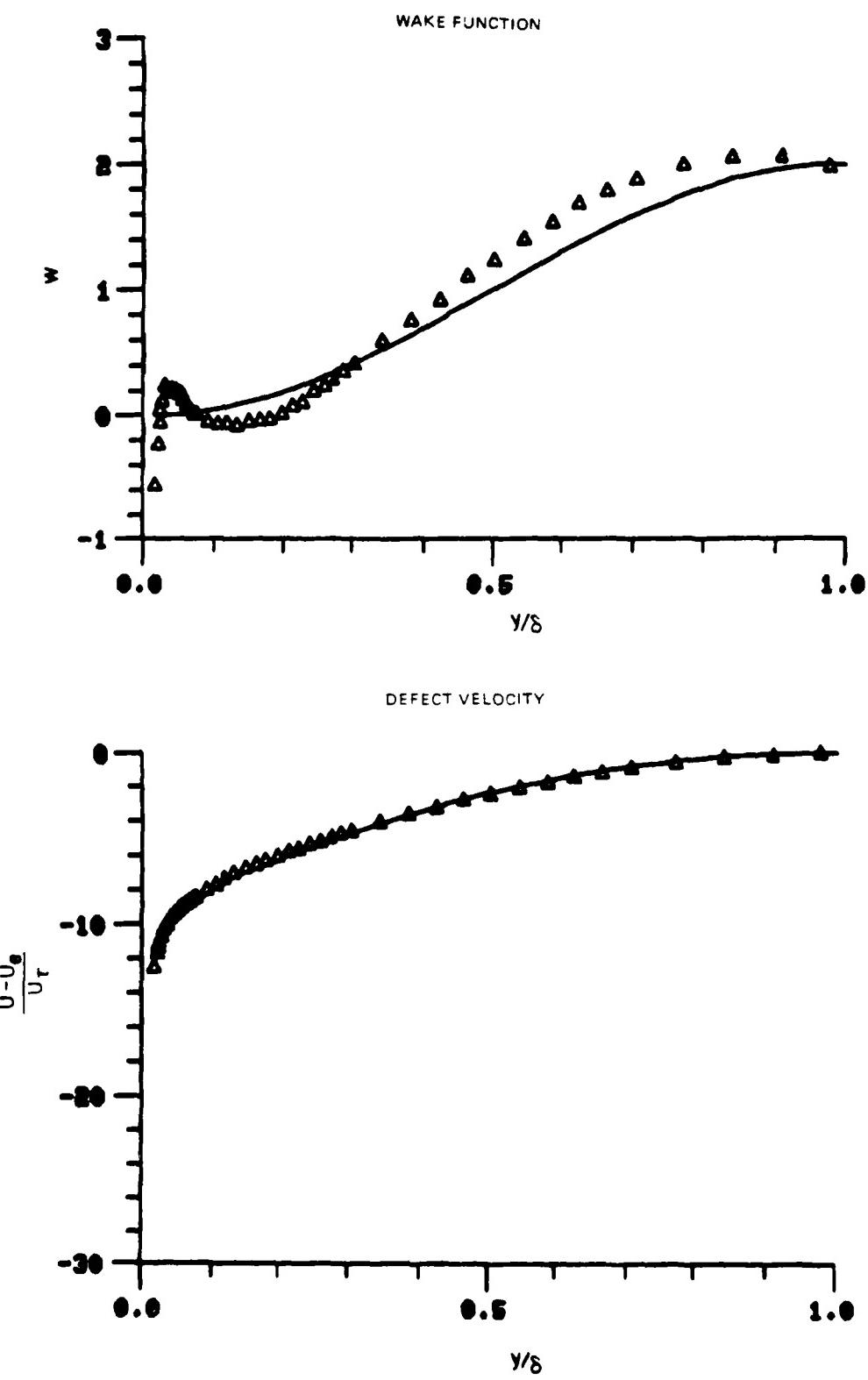
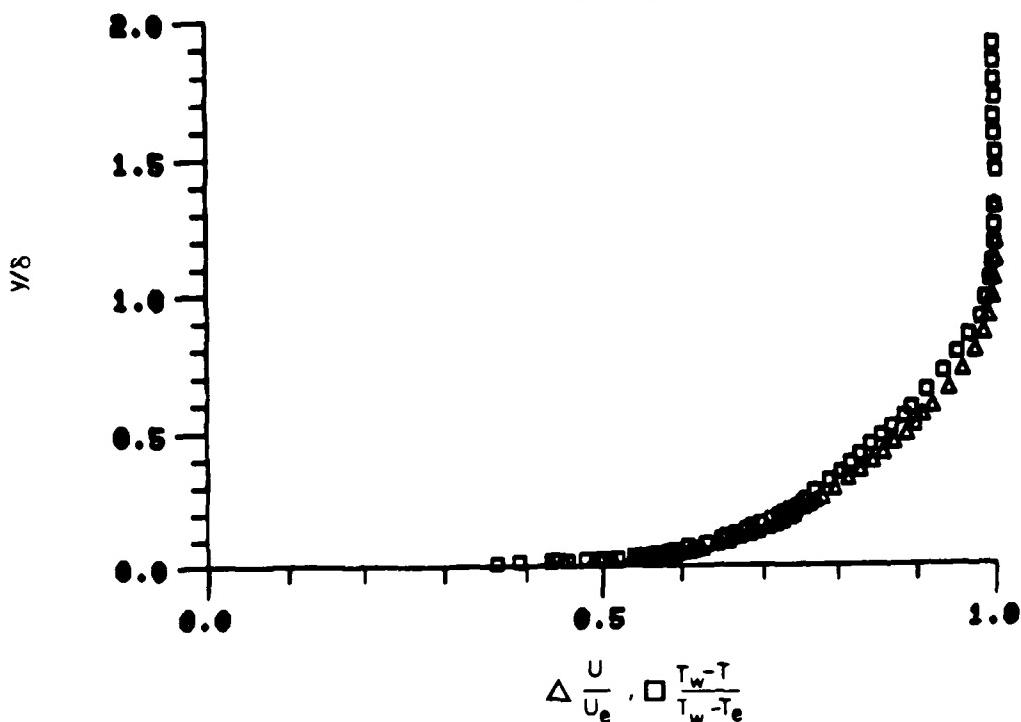


Figure 20. Boundary Layer Velocity Profiles
Run No. 8 Point No. 7

78-12-100-2

VELOCITY AND TEMPERATURE RATIOS



VELOCITY AND TEMPERATURE DISTRIBUTIONS IN UNIVERSAL COORDINATES

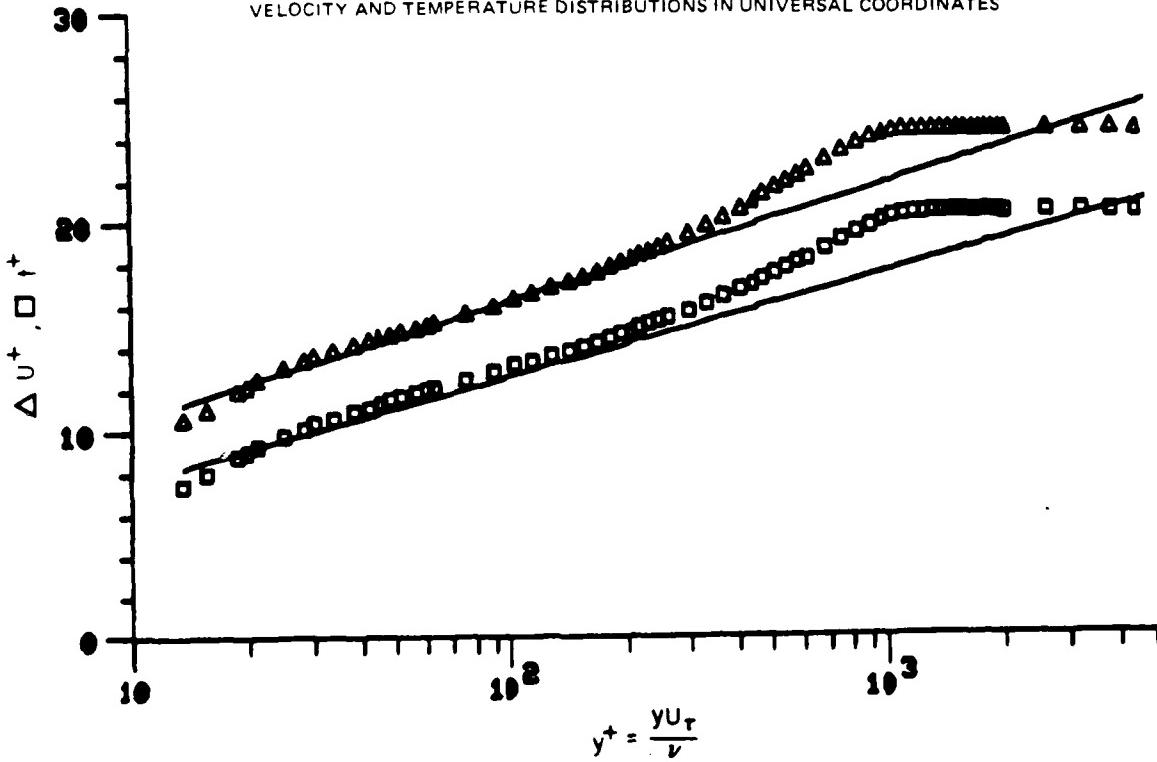


Figure 21. Boundary Layer Velocity and Temperature Profiles
Run No. 8 Point No. 9

78-12-100-1

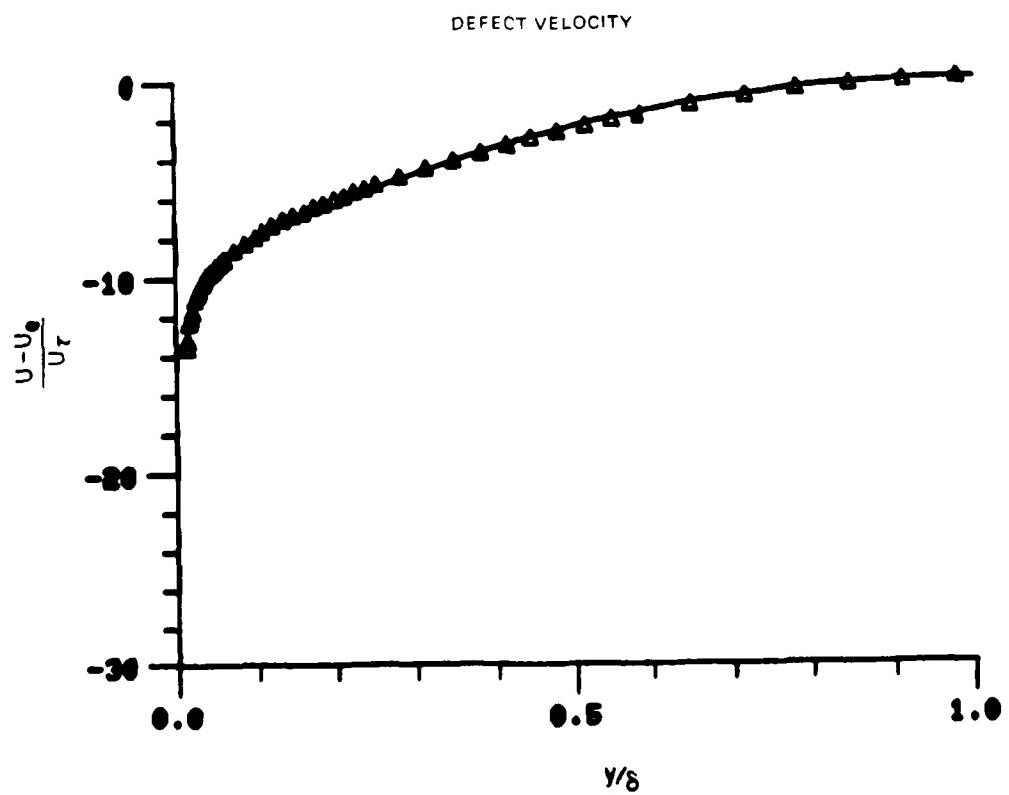
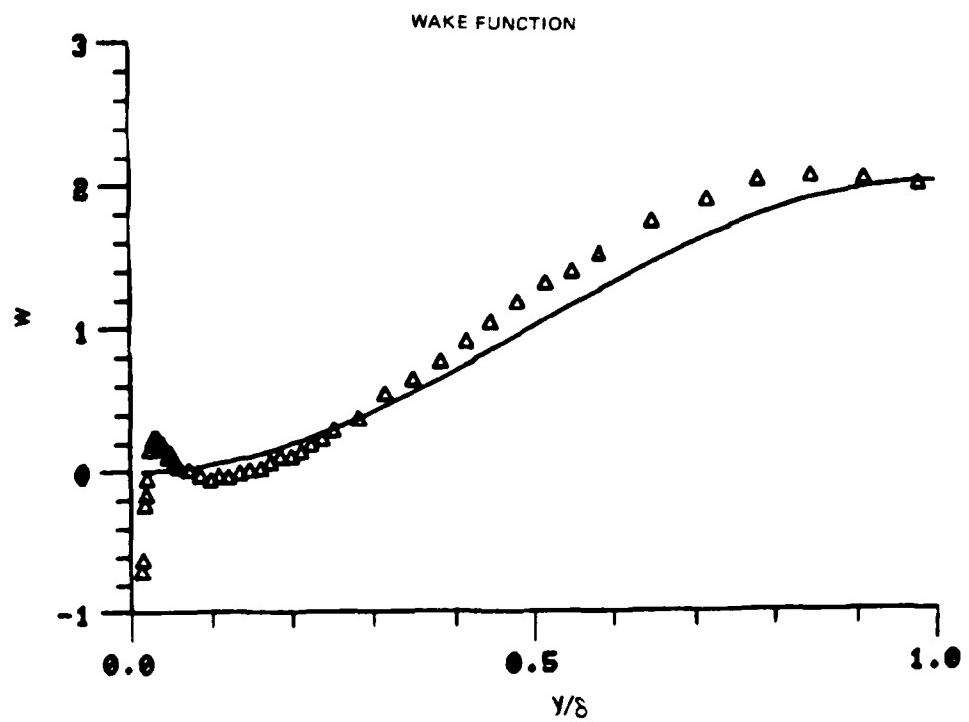


Figure 21. Boundary Layer Velocity Profiles
Run No.8 Point No.9

78-12-100-2

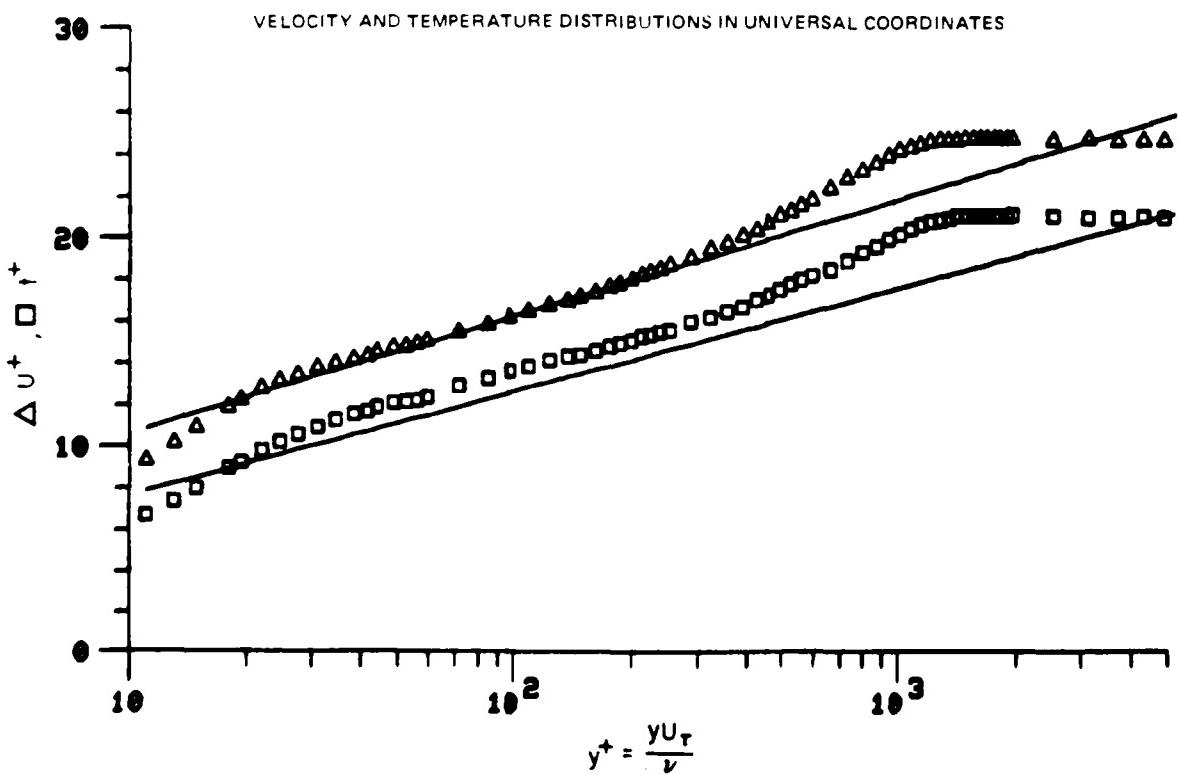
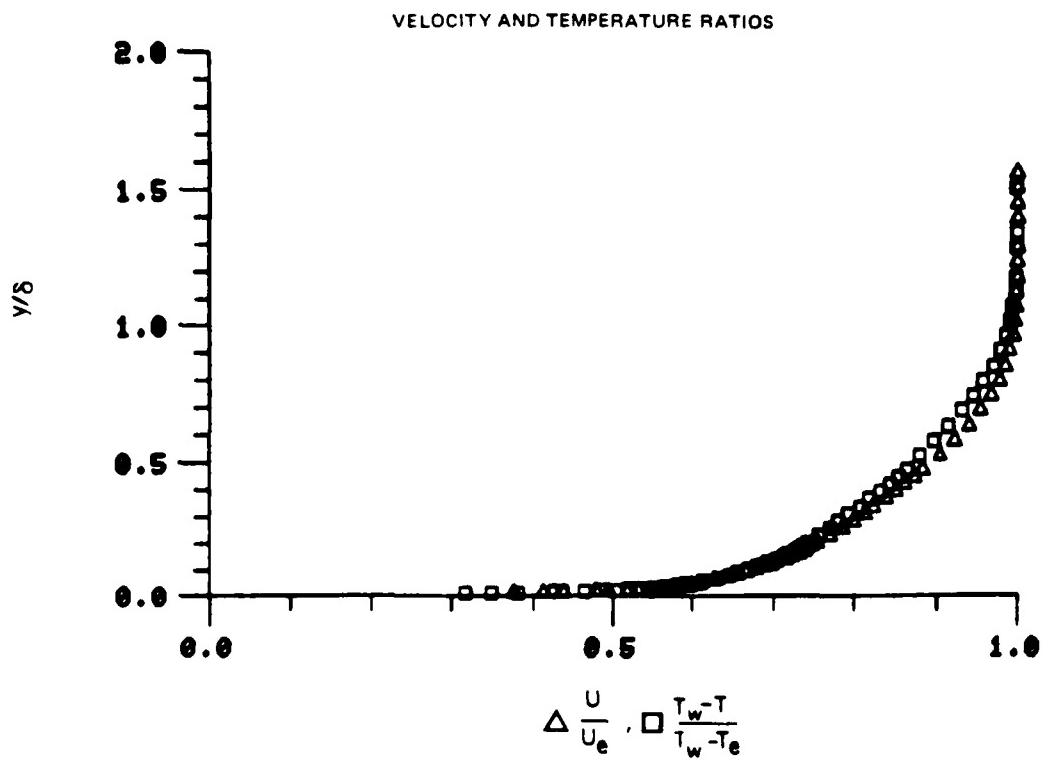


Figure 22. Boundary Layer Velocity and Temperature Profiles
Run No. 8 Point No. 10

78-12-100-1

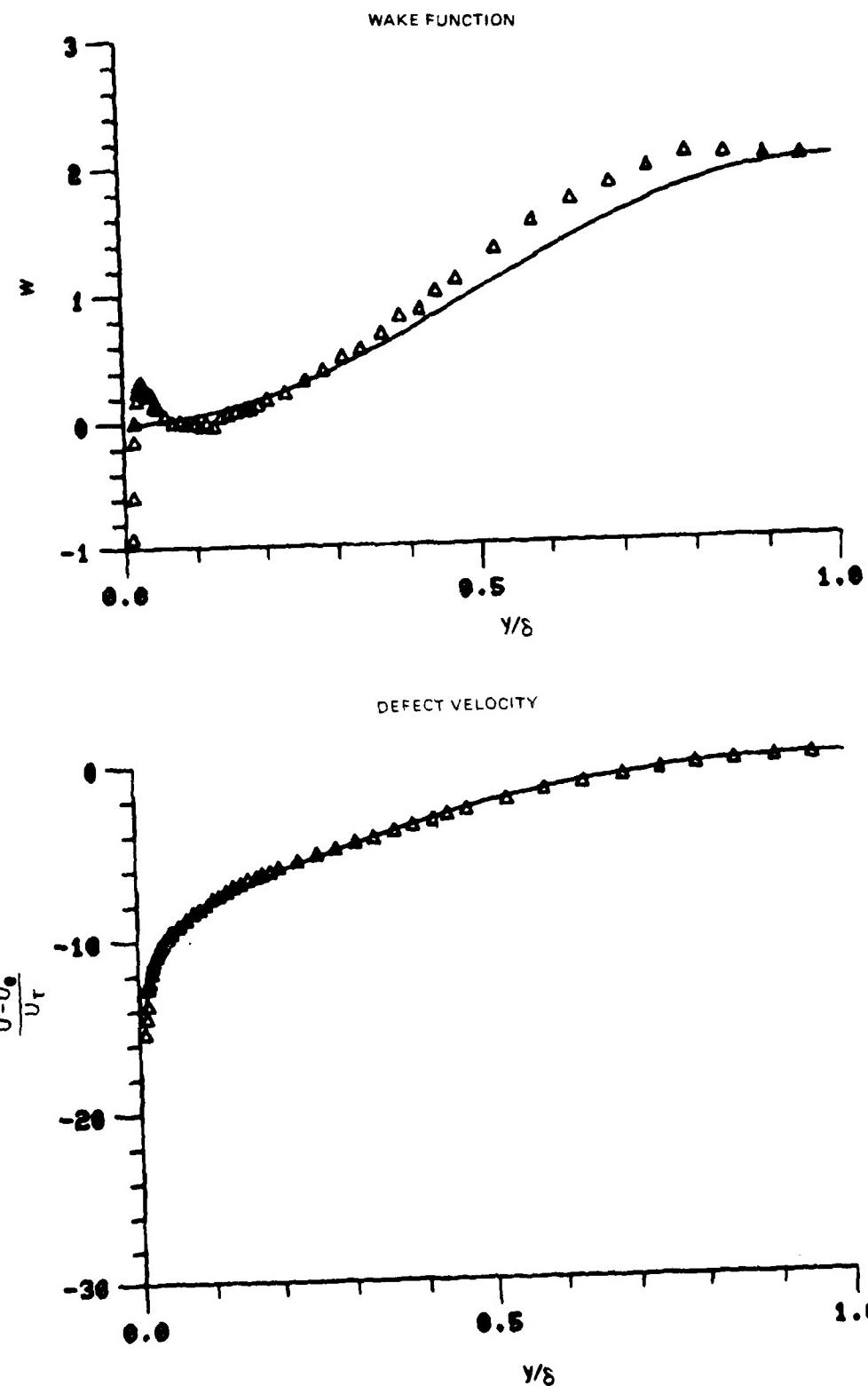


Figure 22. Boundary Layer Velocity Profiles
Run No. 8 Point No. 10

78-12-100-2

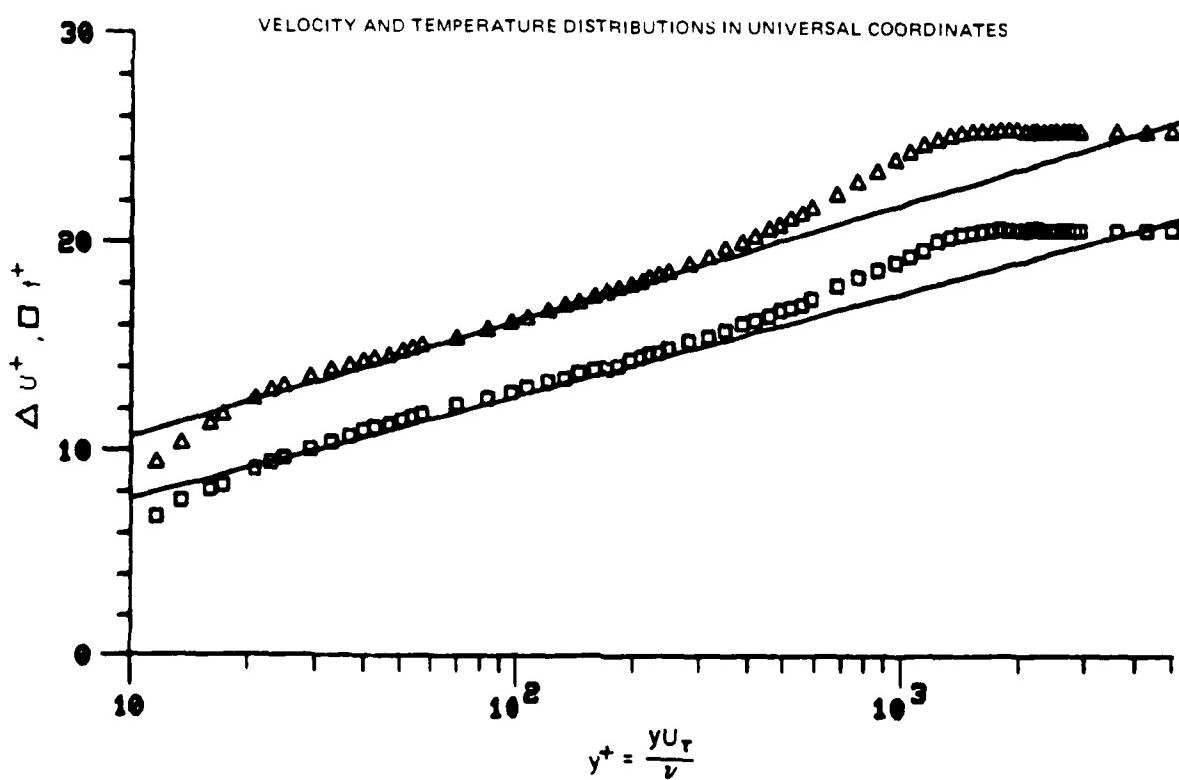
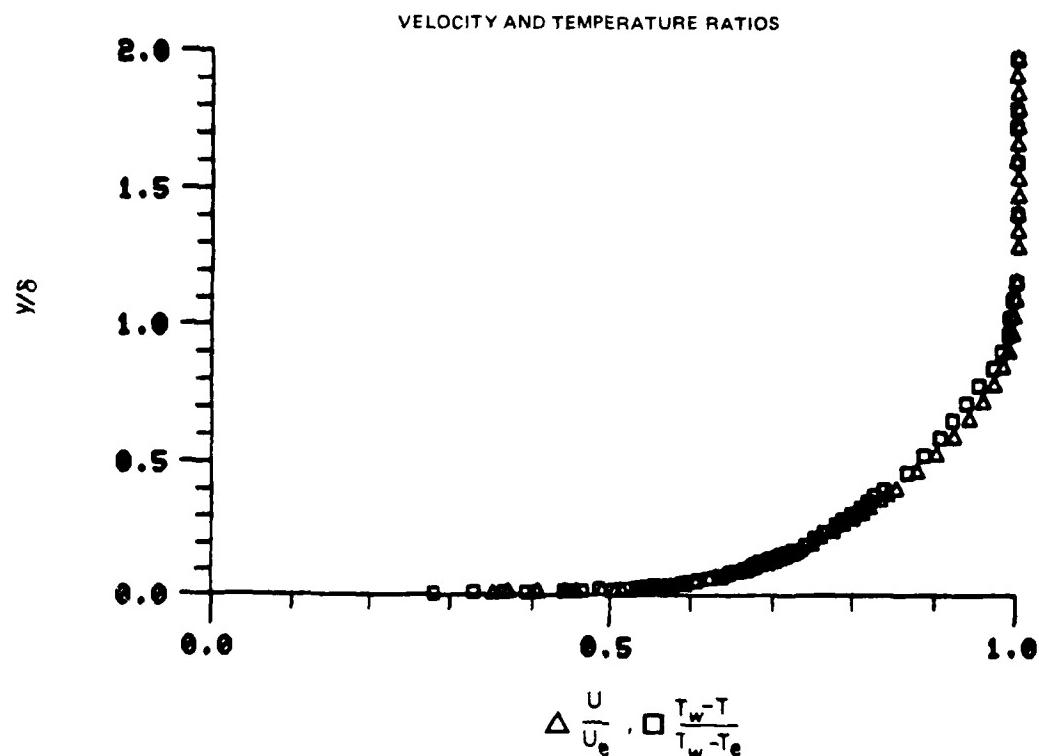


Figure 23. Boundary Layer Velocity and Temperature Profiles
Run No. 8 Point No. 13

78-12-100-1

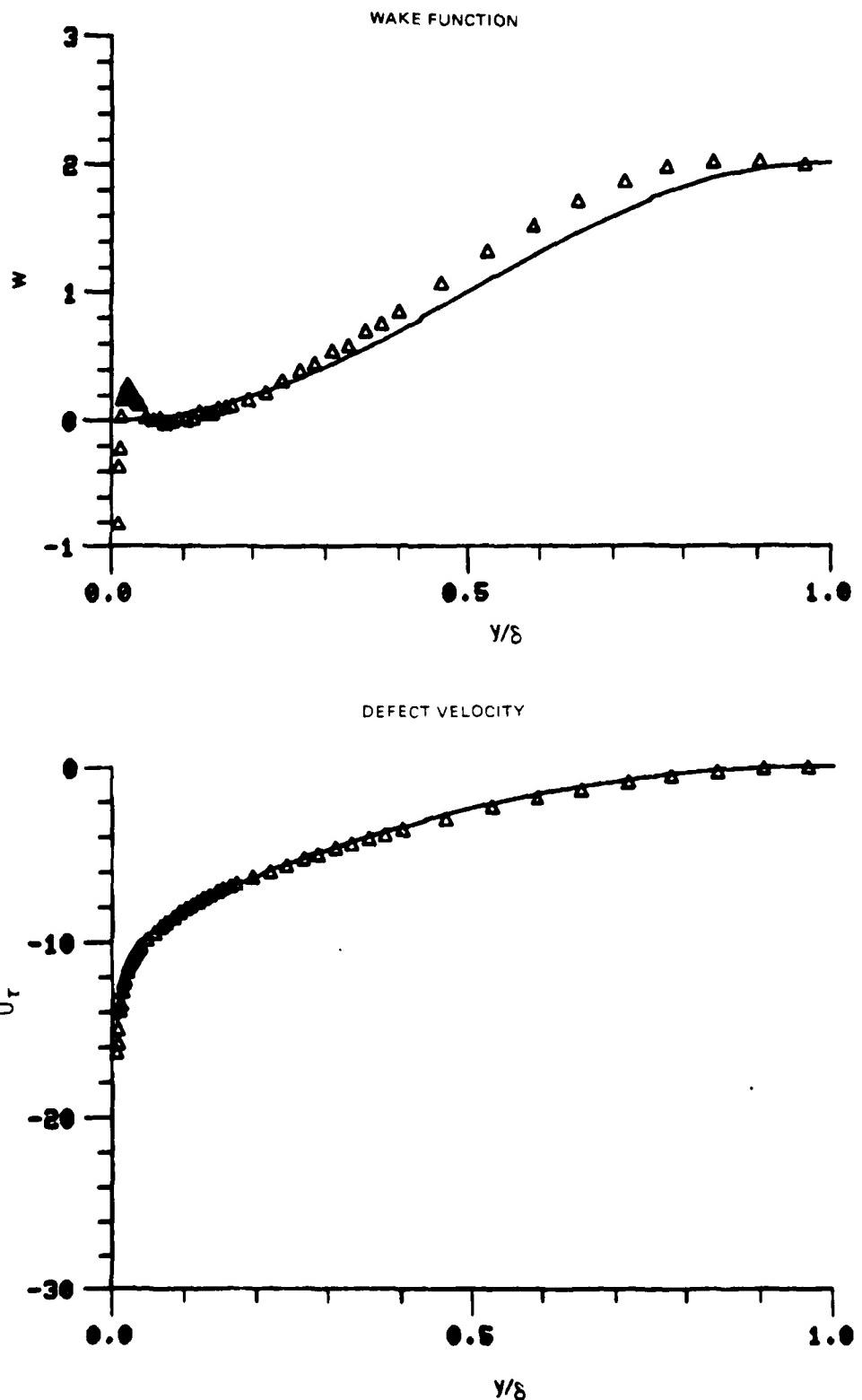


Figure 23. Boundary Layer Velocity Profiles
Run No. 8 Point No. 13

78-12-100-2

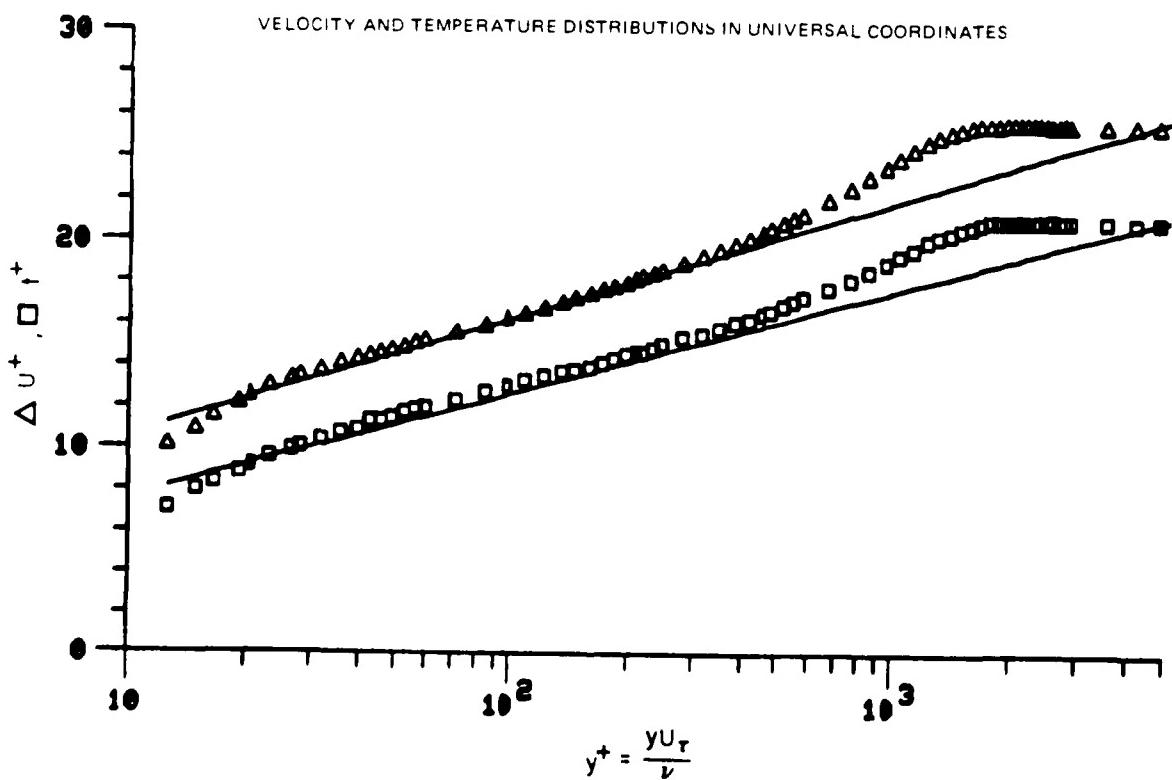
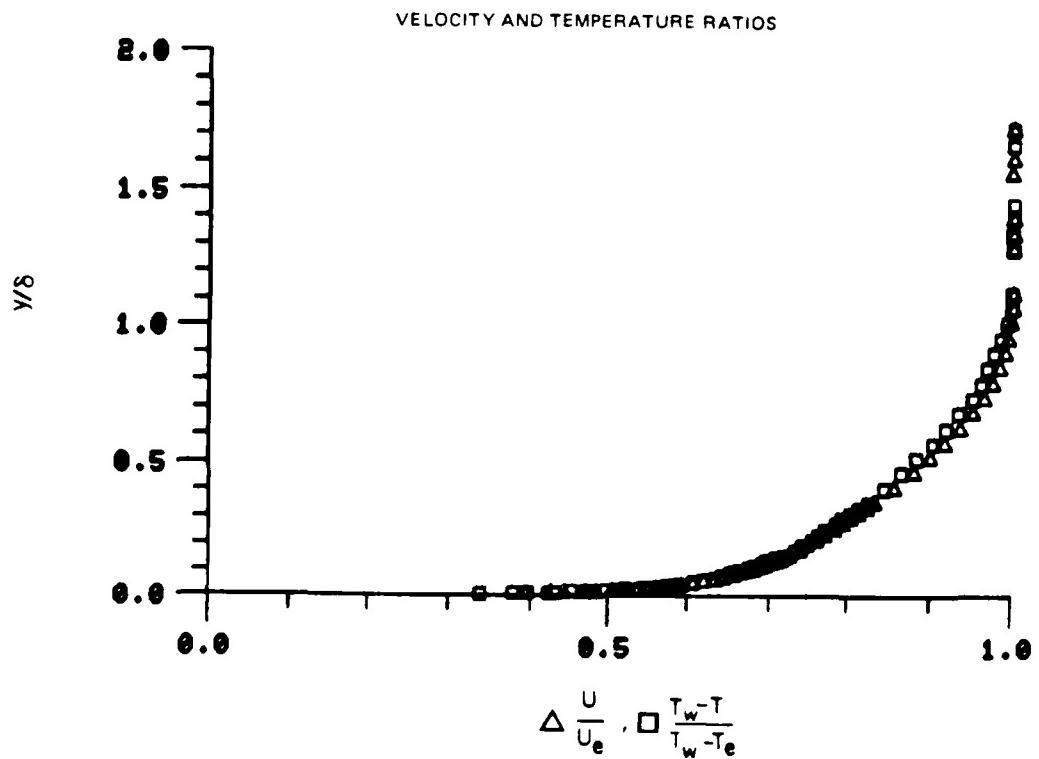


Figure 24. Boundary Layer Velocity and Temperature Profiles
Run No. 8 Point No. 14

78-12-100-1

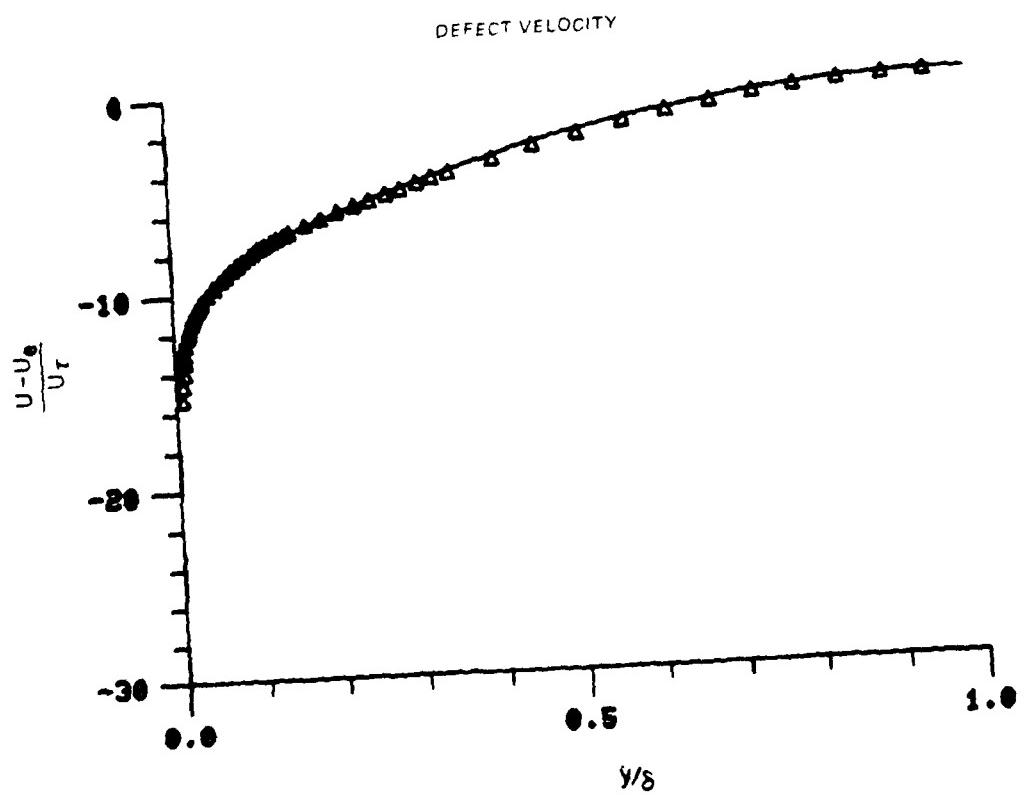
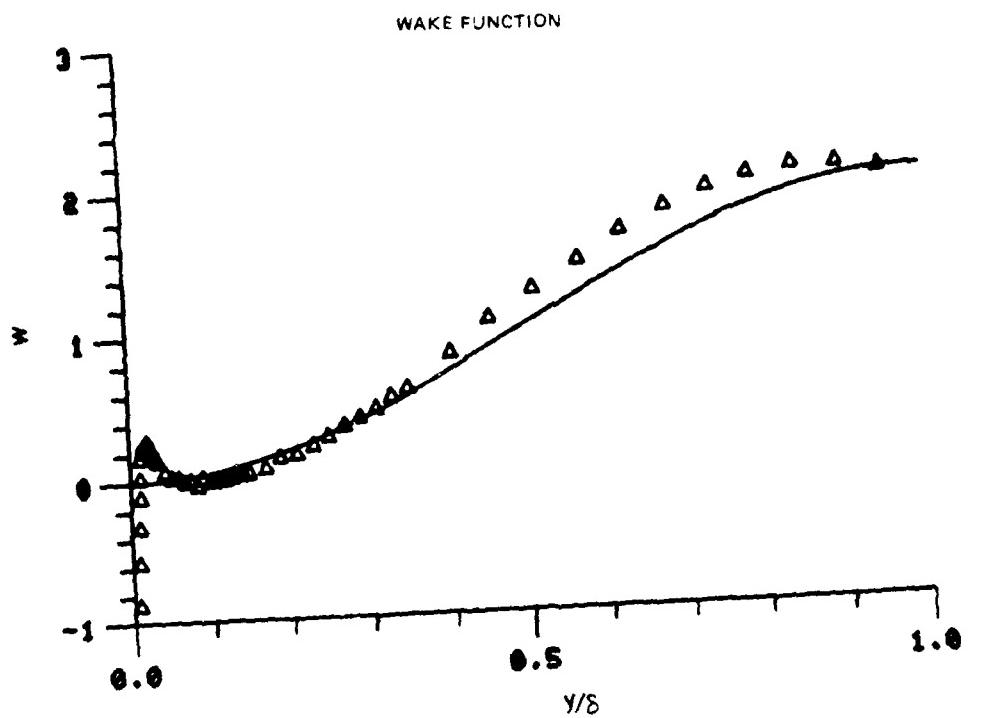


Figure 24. Boundary Layer Velocity Profiles
Run No. 8 Point No. 14

78-12-100-2

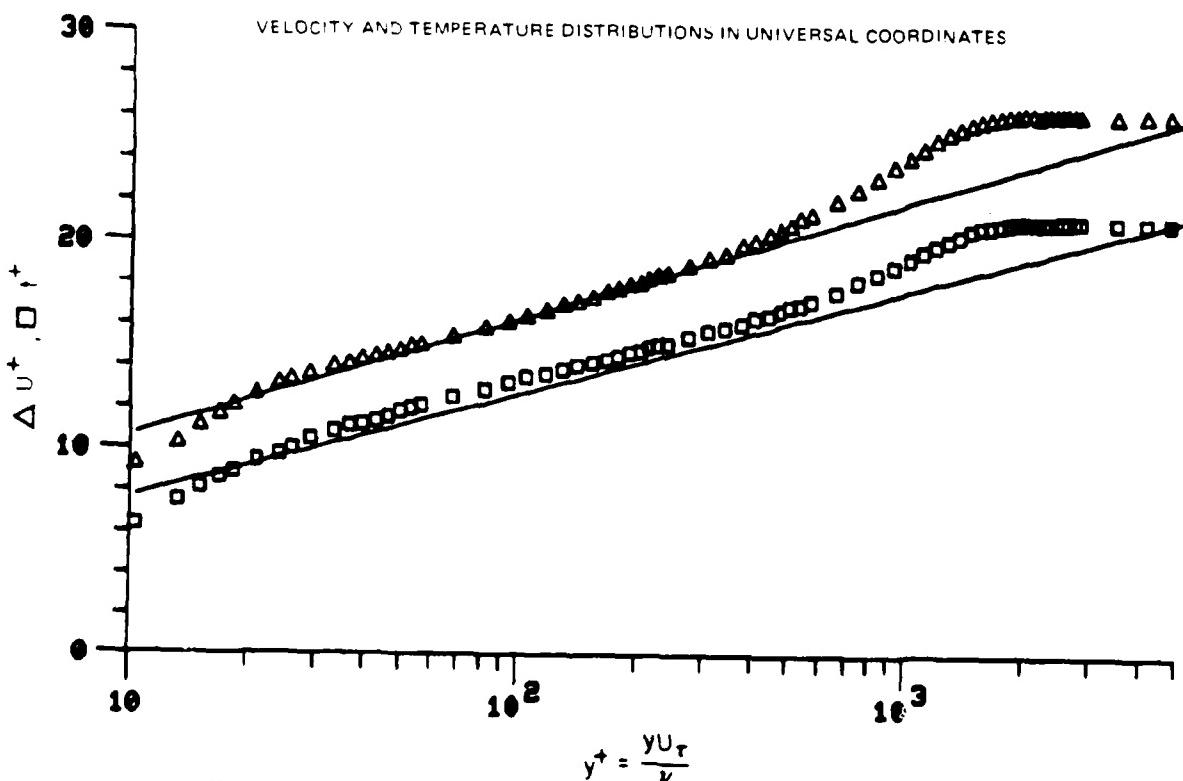
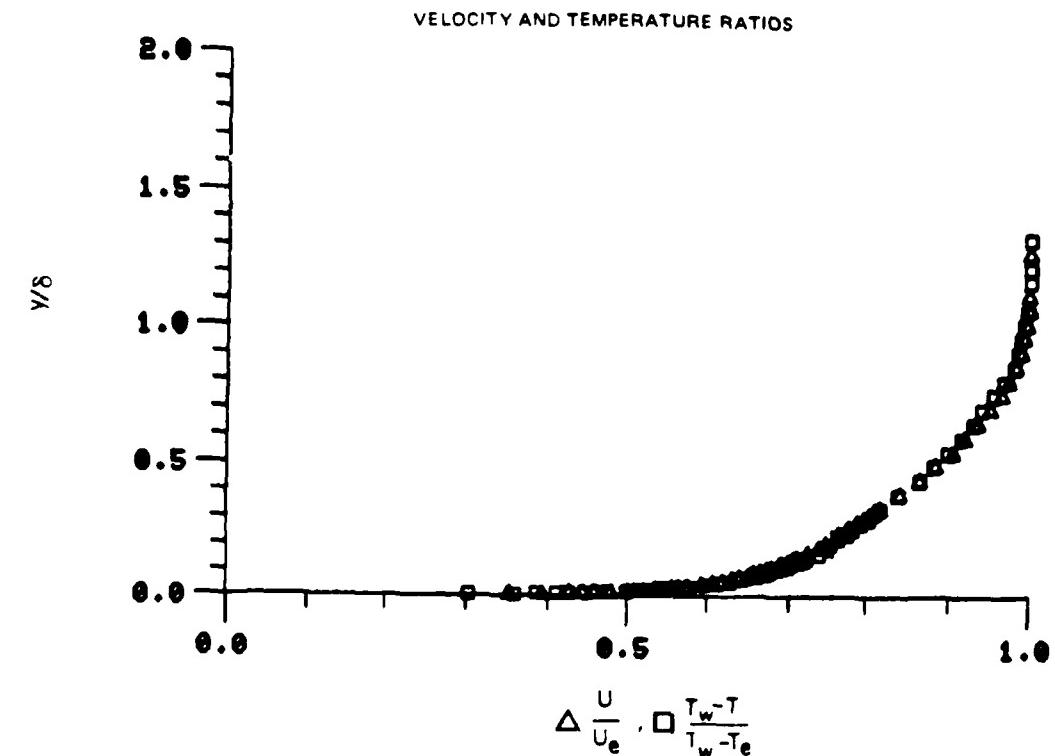


Figure 25. Boundary Layer Velocity and Temperature Profiles
Run No. 8 Point No. 15

78-12-100-1

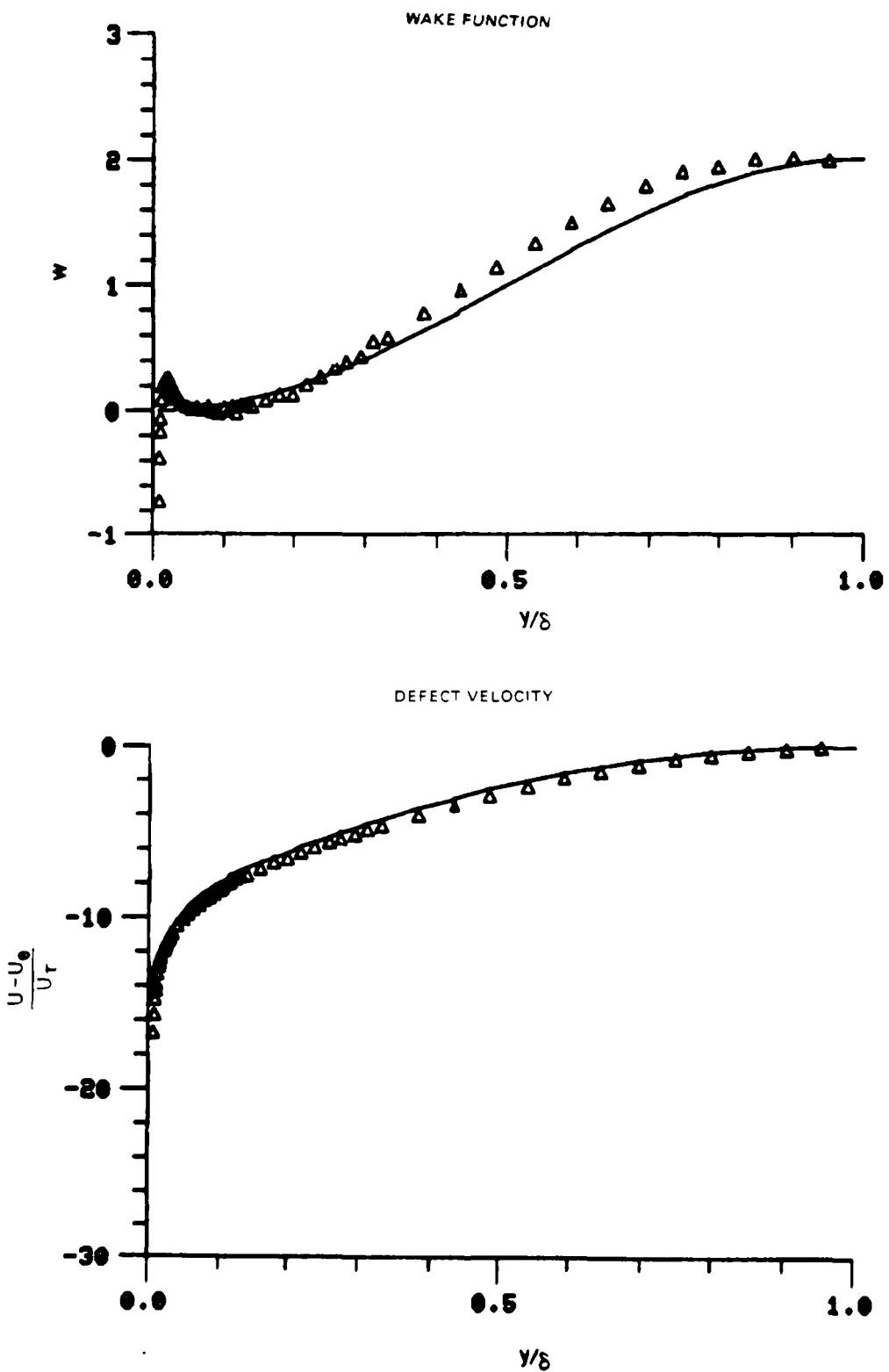


Figure 25. Boundary Layer Velocity Profiles
Run No. 8 Point No. 15

78-12-100-2

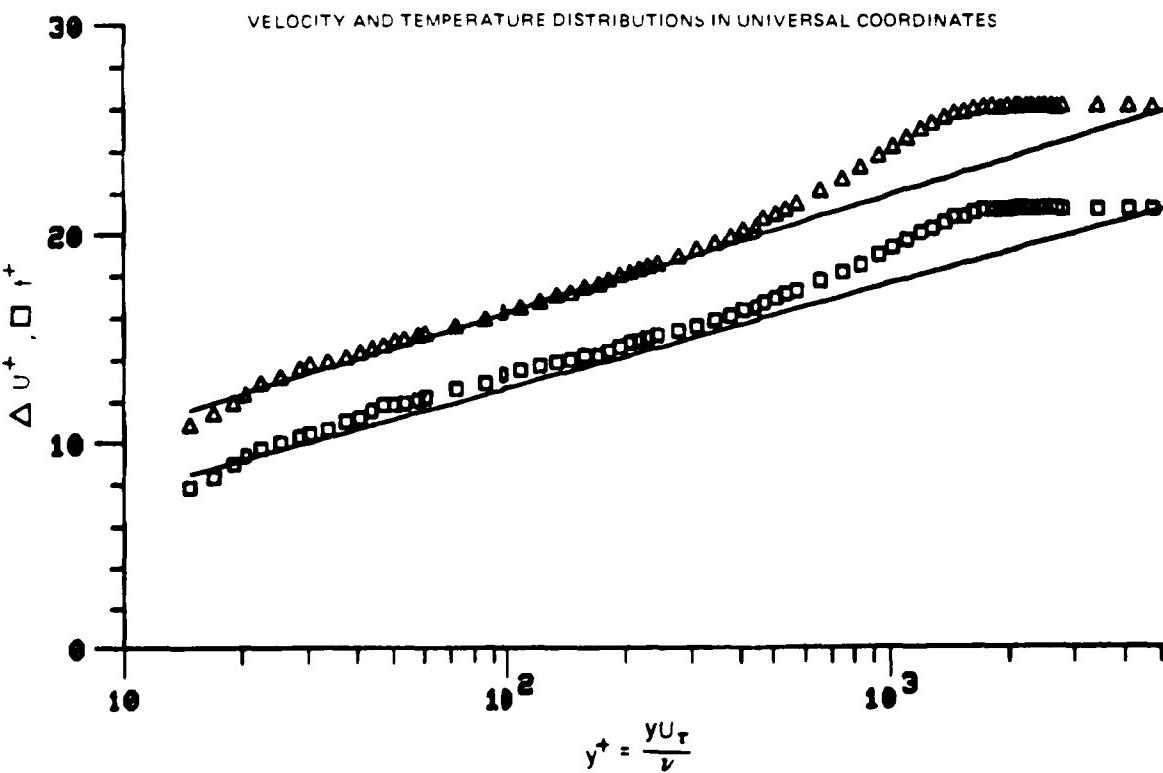
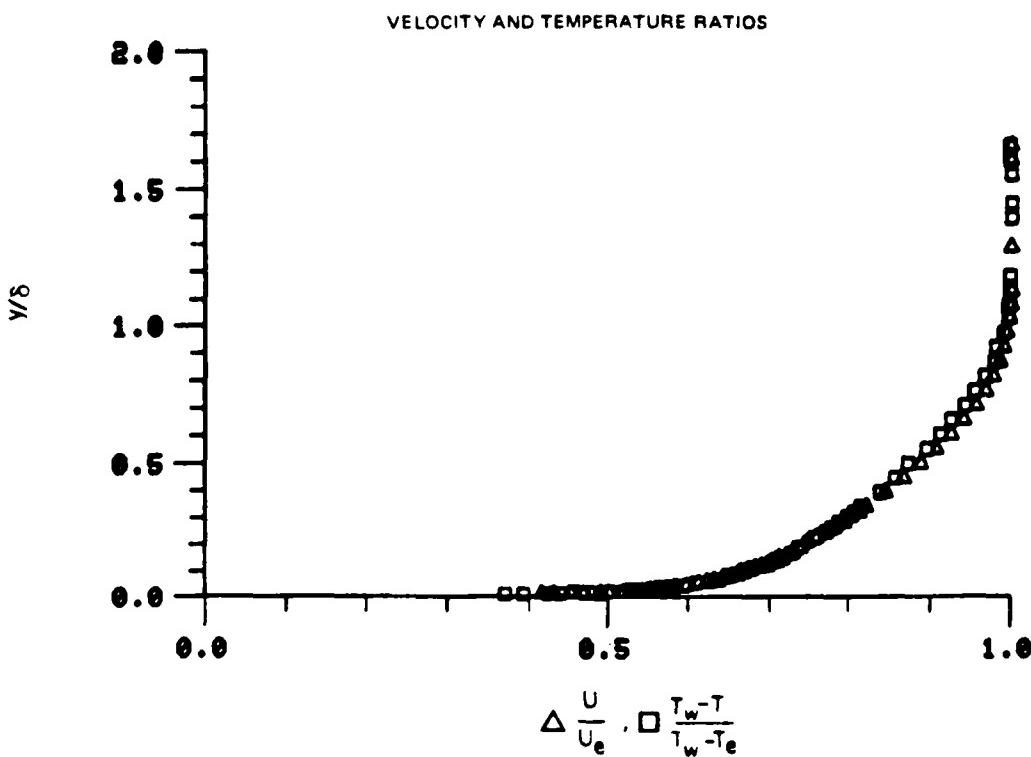


Figure 26. Boundary Layer Velocity and Temperature Profiles
Run No. 8 Point No. 16

78-12-100-1

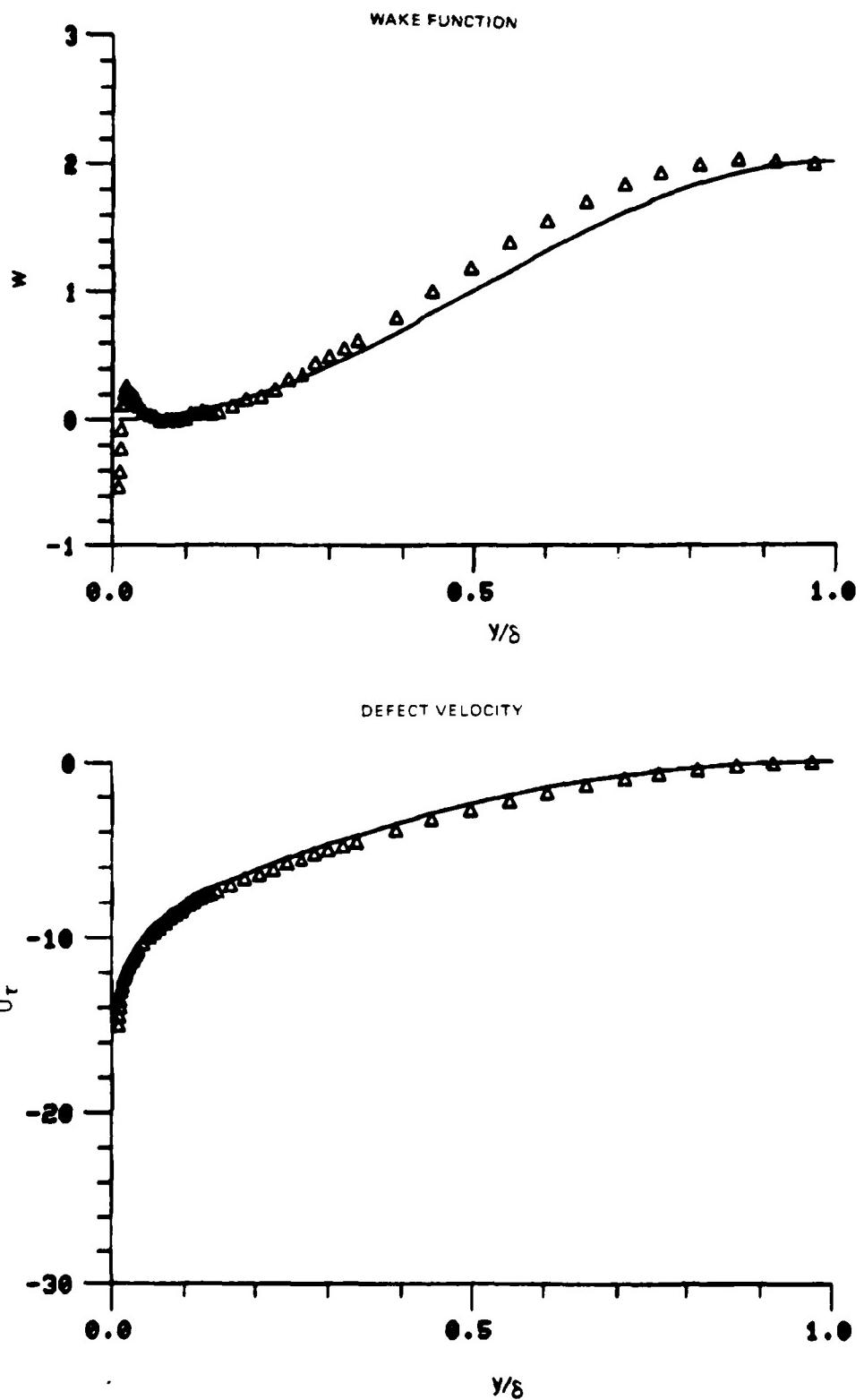


Figure 26. Boundary Layer Velocity Profiles
Run No. 8 Point No. 16

78-12-100-2

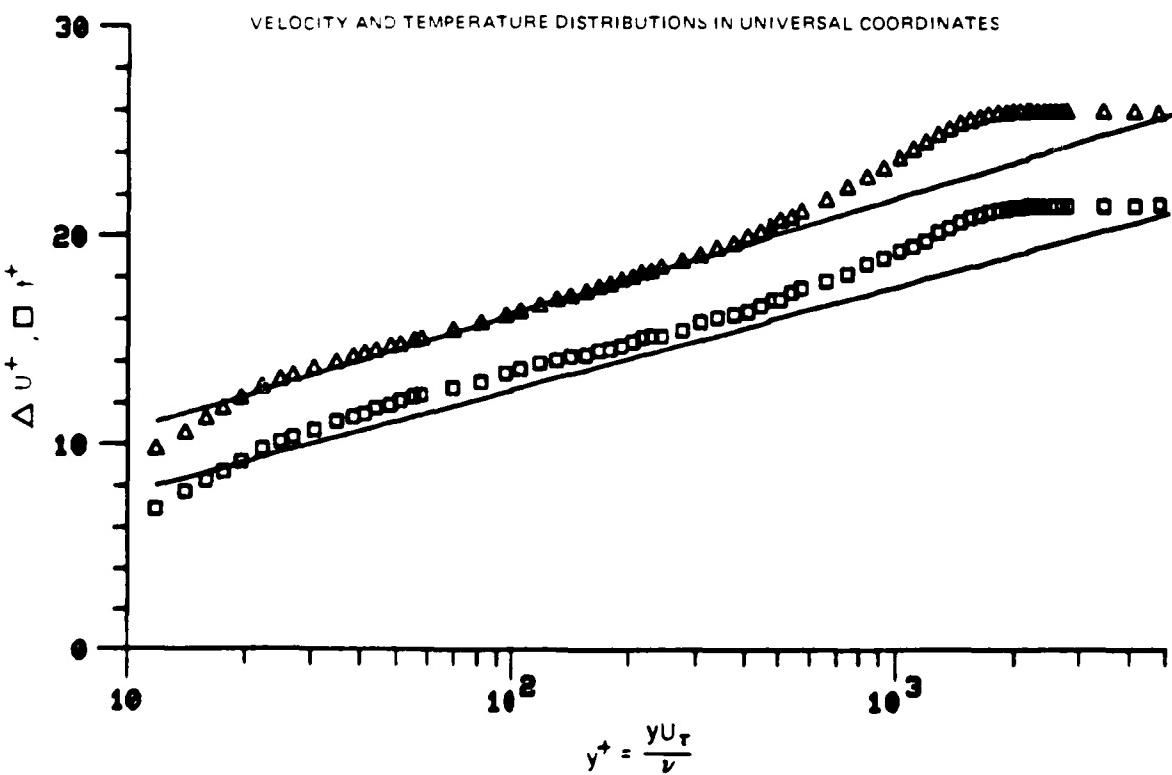
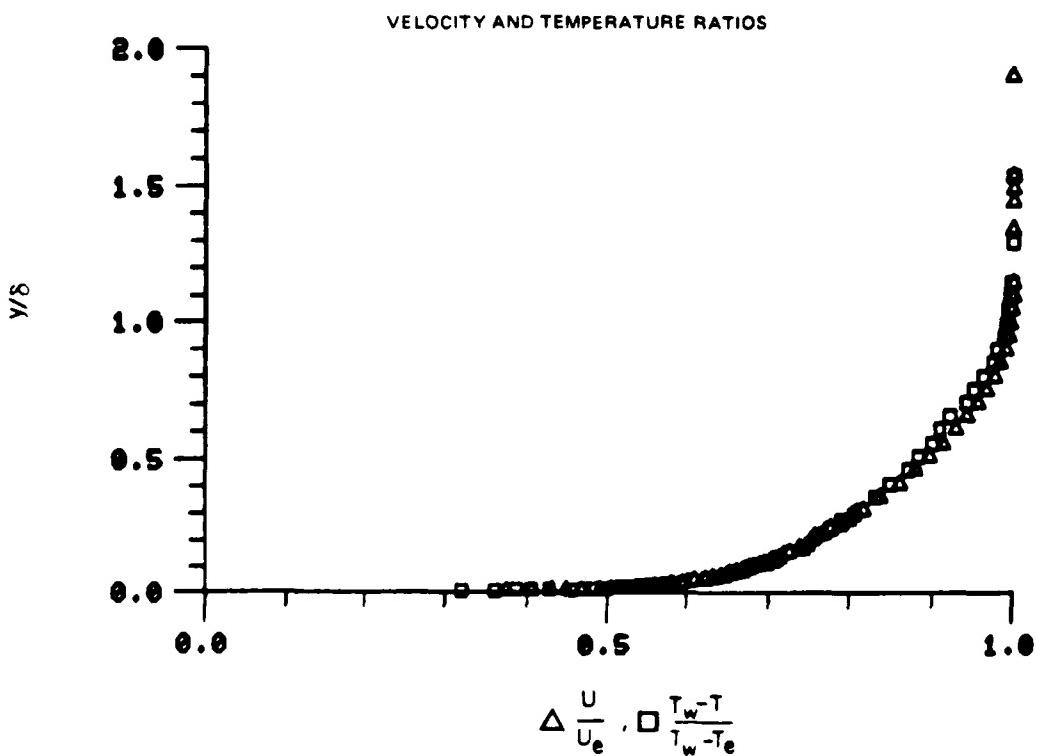


Figure 27. Boundary Layer Velocity and Temperature Profiles
Run No. 8 Point No. 17

78-12-100-1

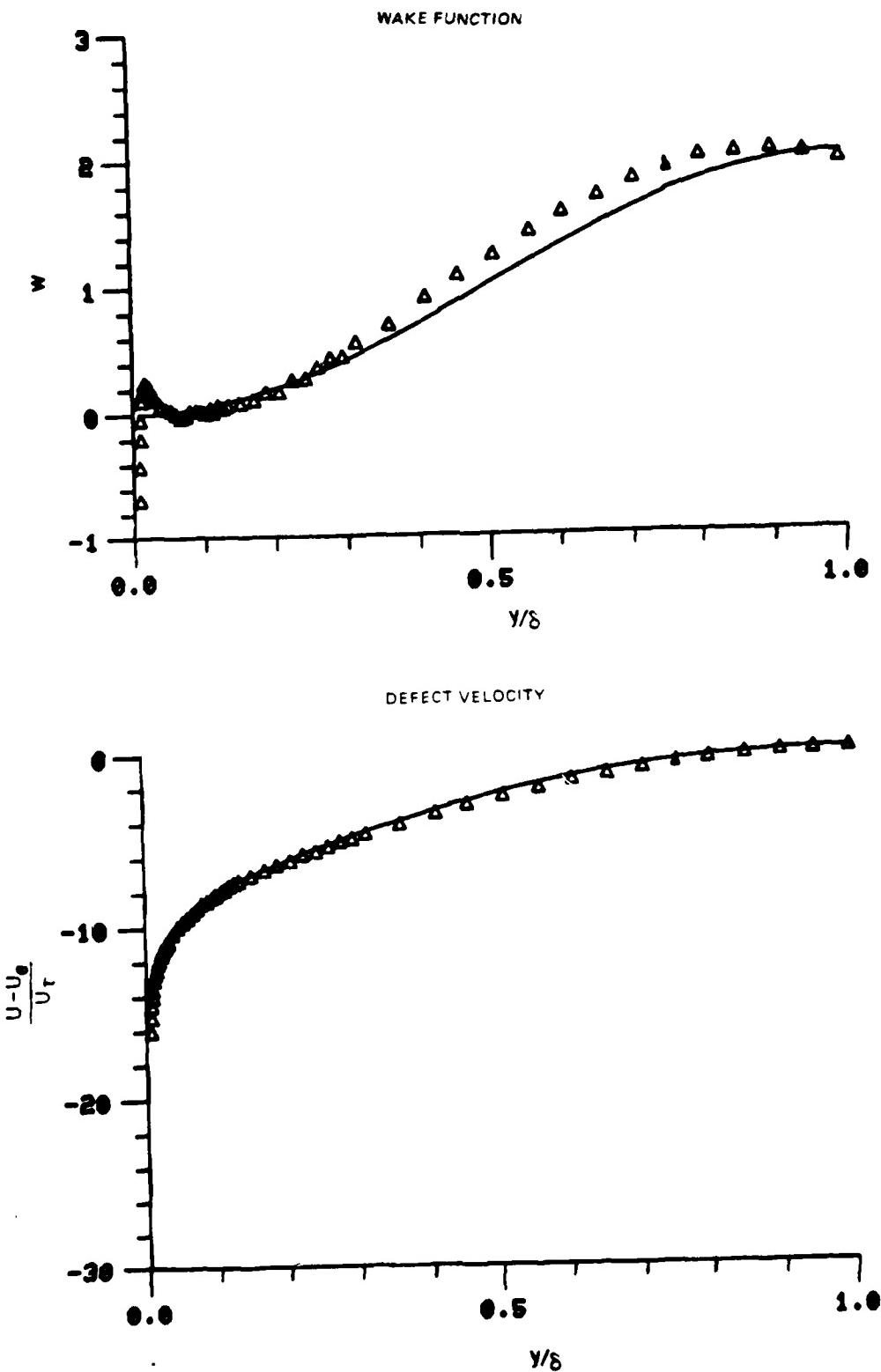


Figure 27. Boundary Layer Velocity Profiles
Run No.8 Point No.17

78-12-100-2

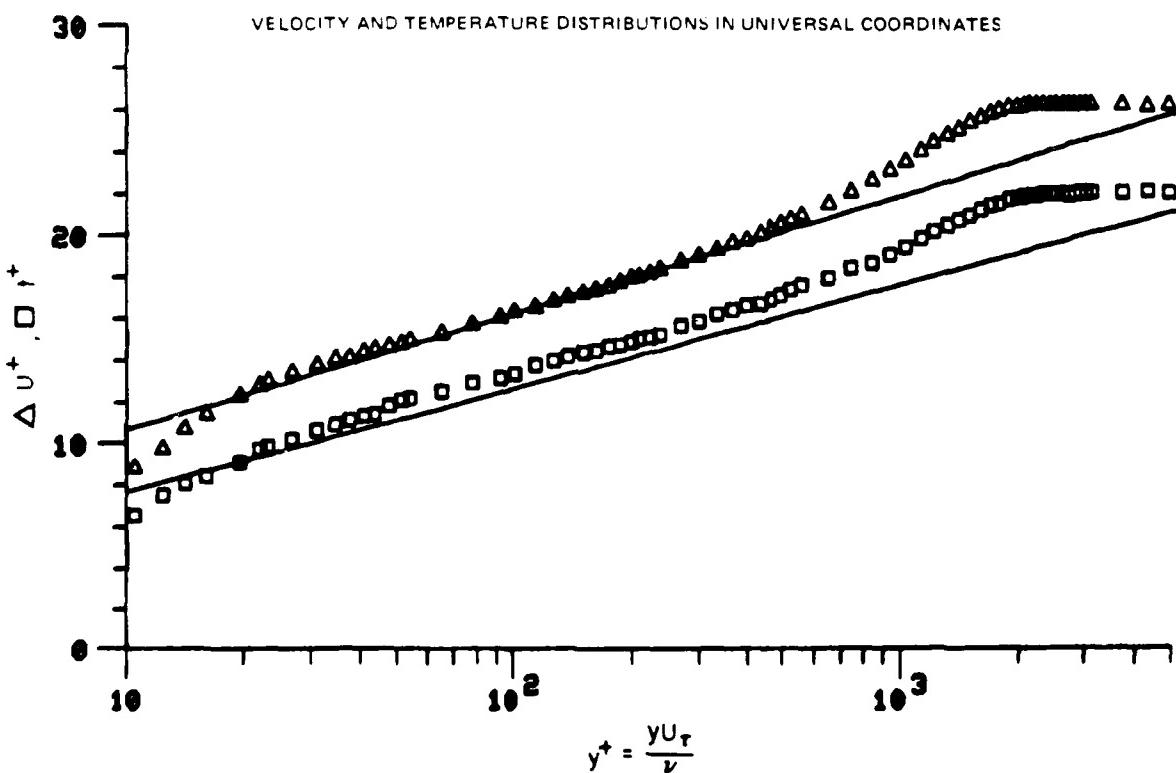
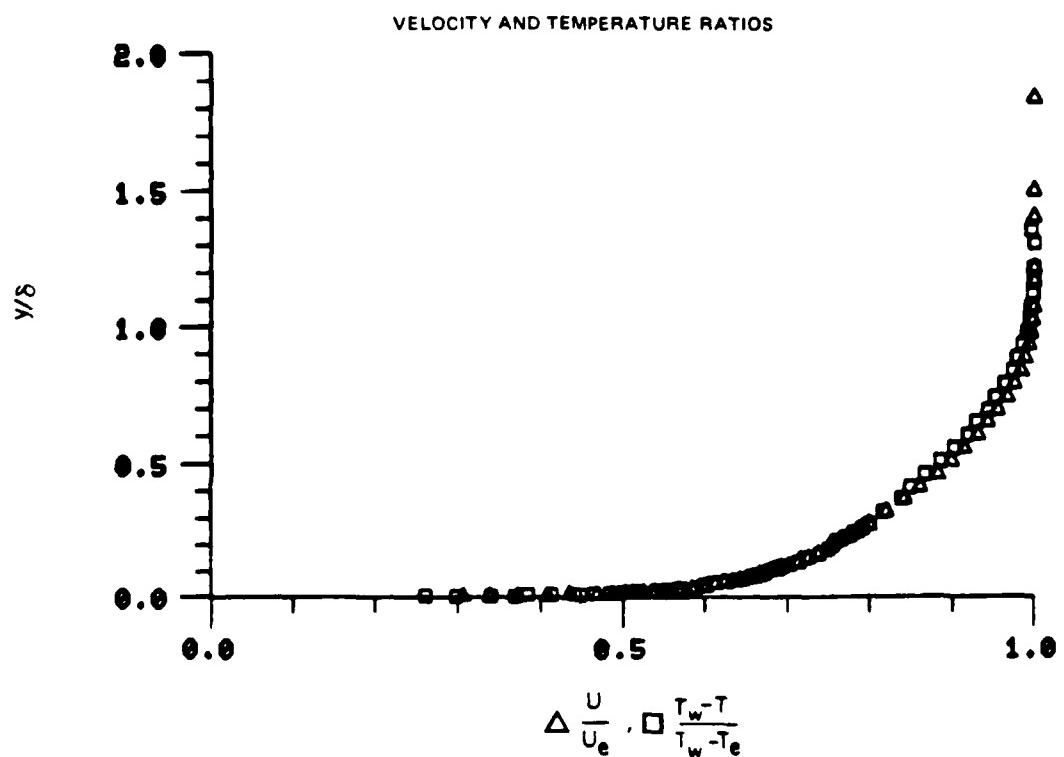


Figure 28. Boundary Layer Velocity and Temperature Profiles
Run No.8 Point No.18

78-12-100-1

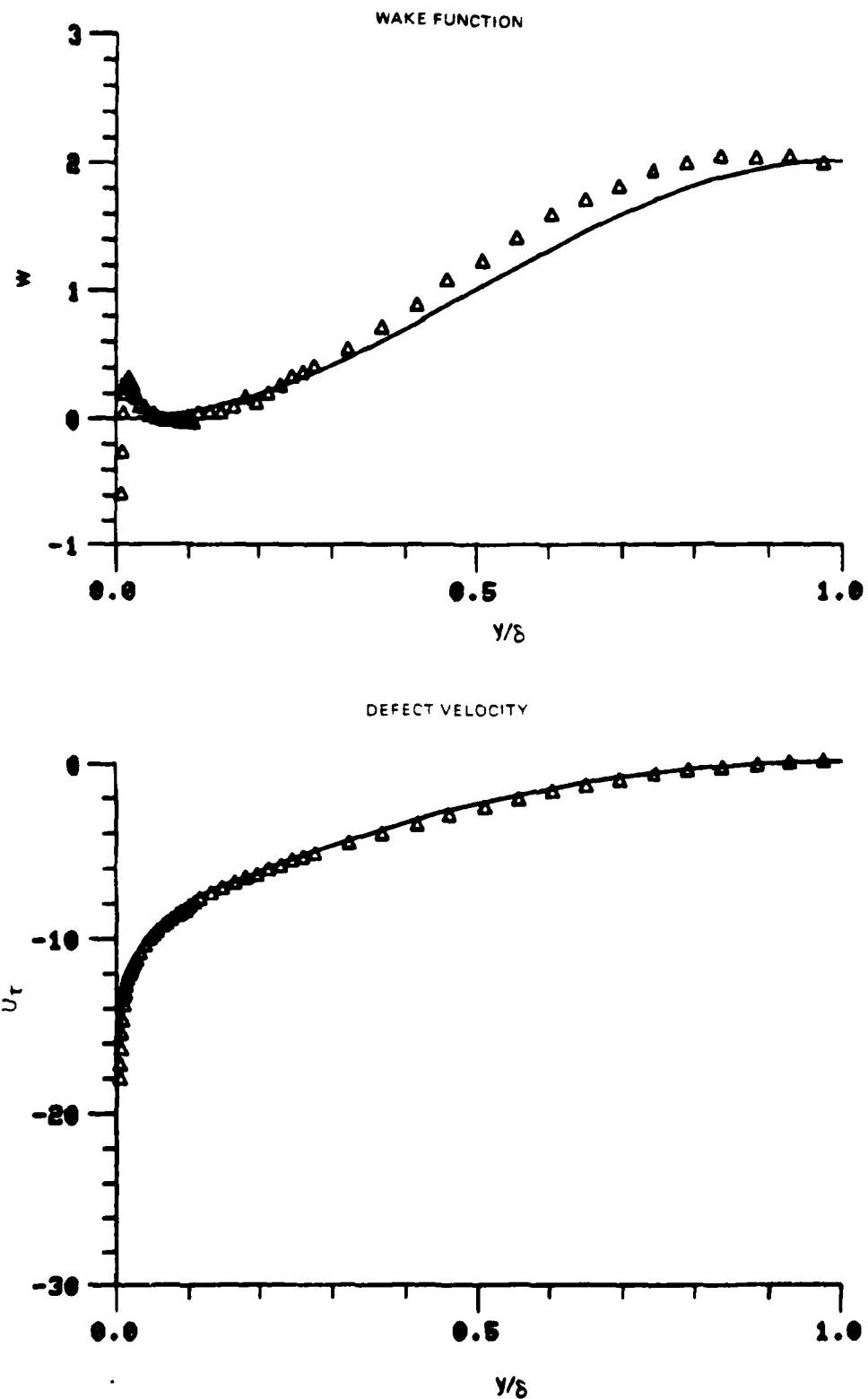


Figure 28. Boundary Layer Velocity Profiles
Run No. 8 Point No. 18

78-12-100-2

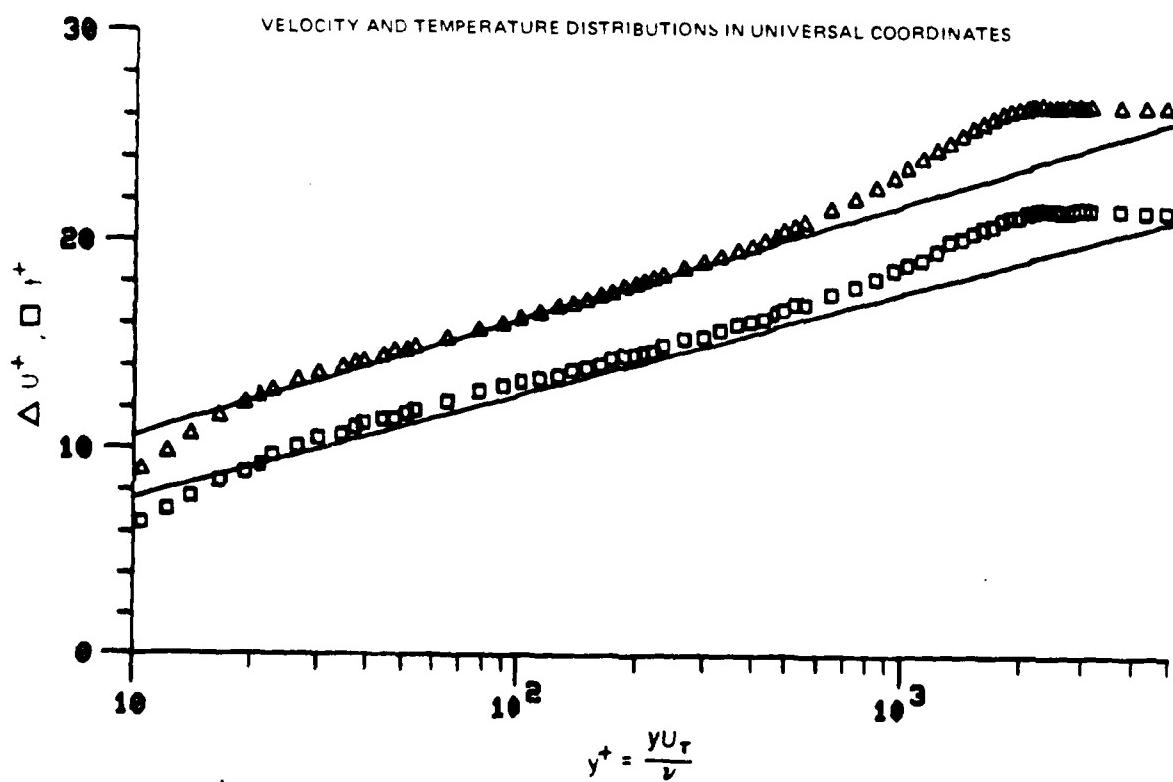
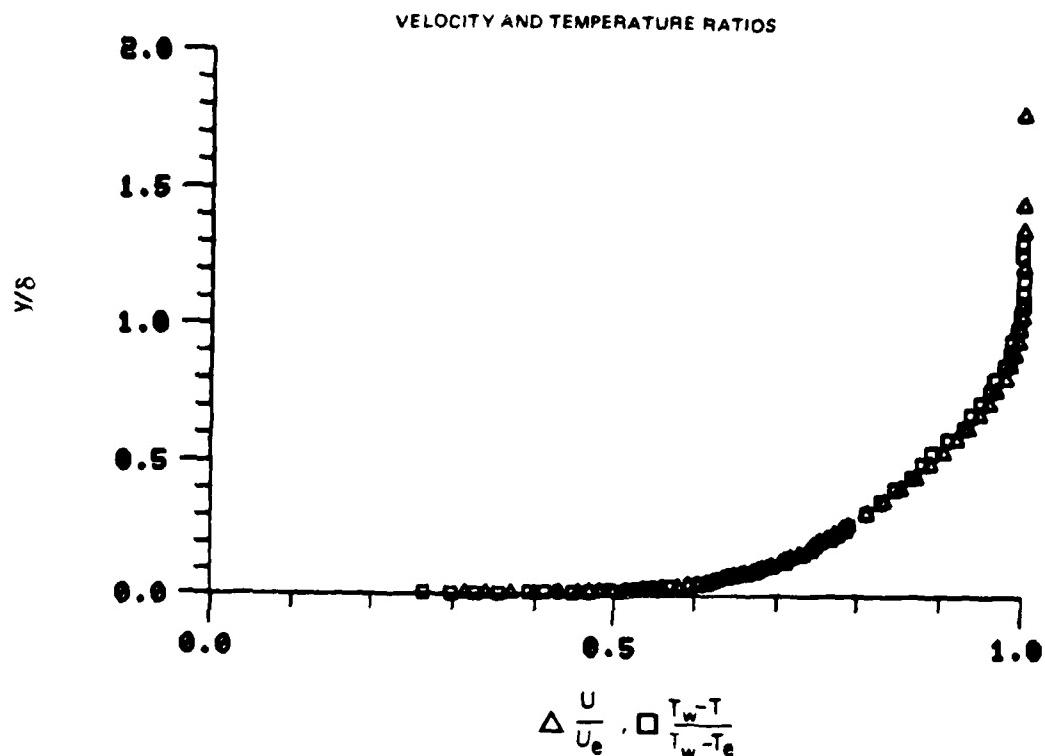


Figure 29. Boundary Layer Velocity and Temperature Profiles
Run No. 8 Point No. 20

78-12-100-1

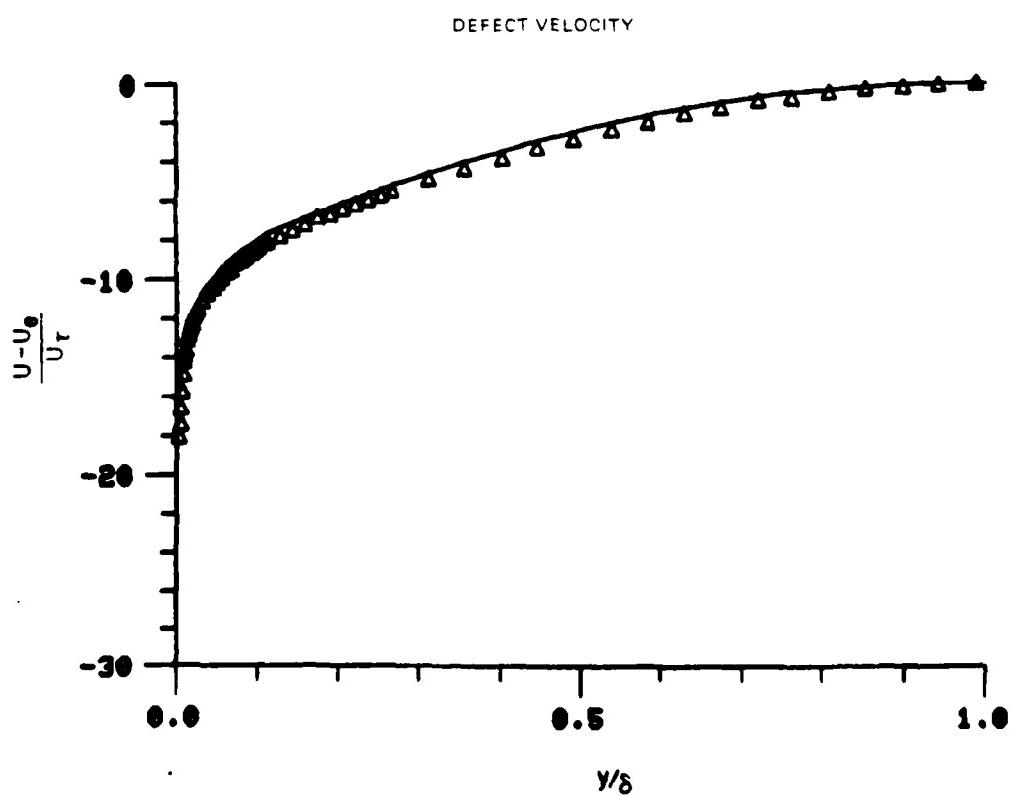
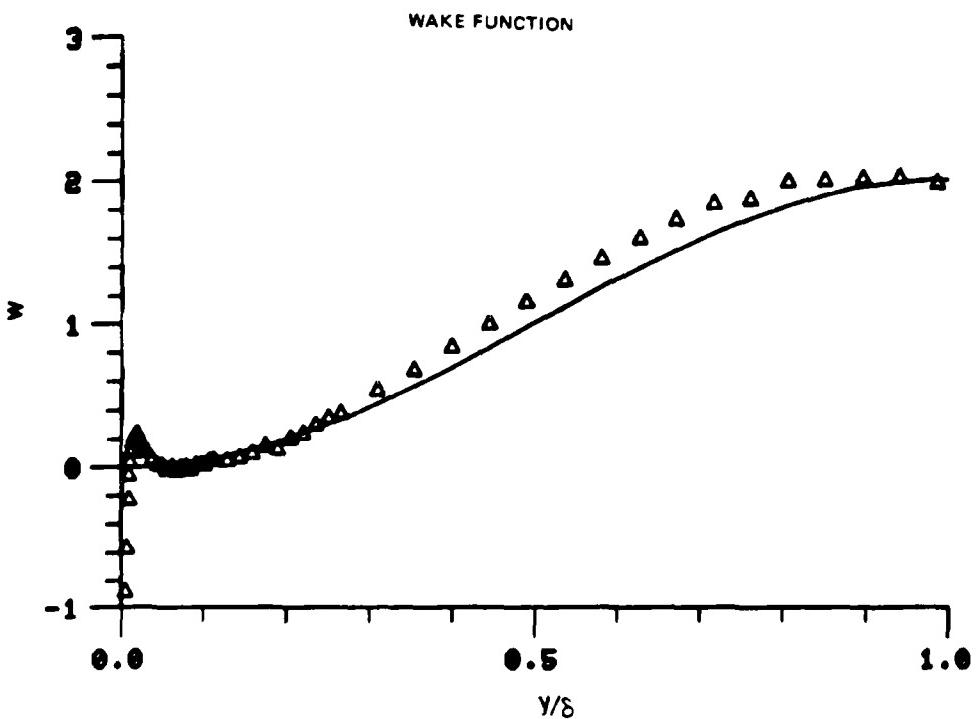


Figure 29. Boundary Layer Velocity Profiles
Run No. 8 Point No. 20

78-12-100-2

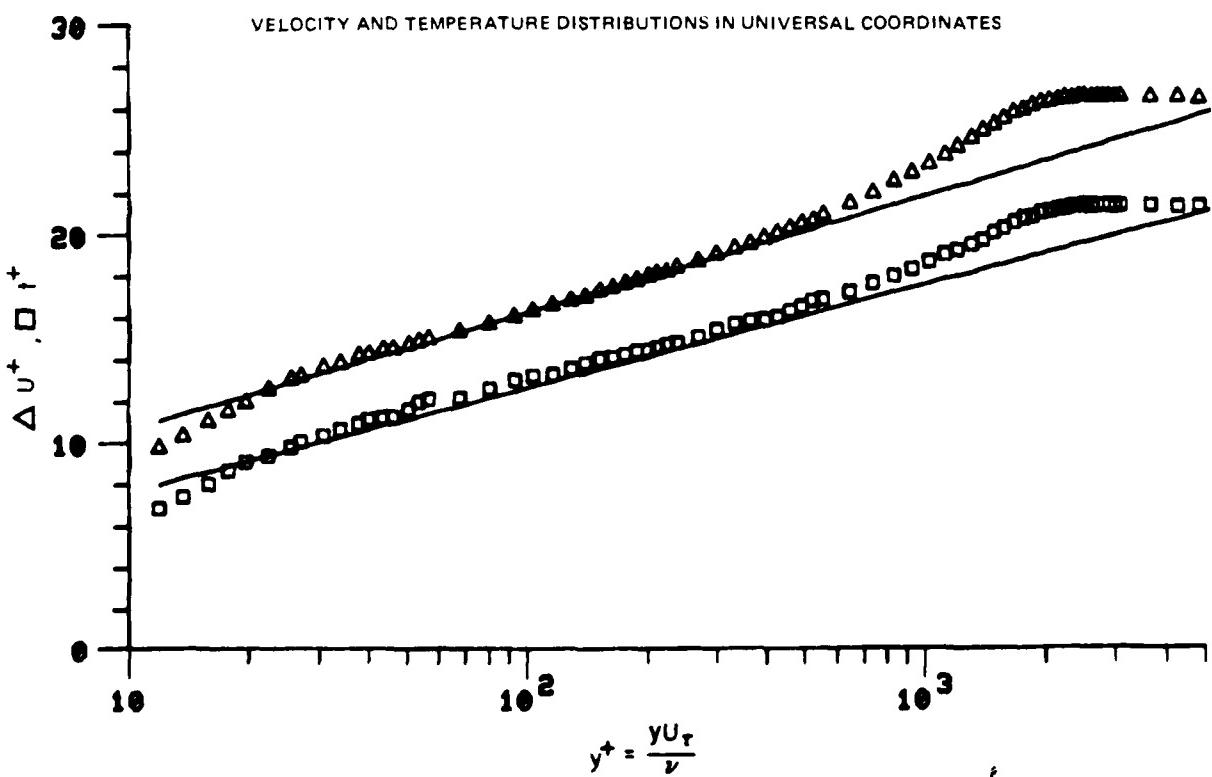
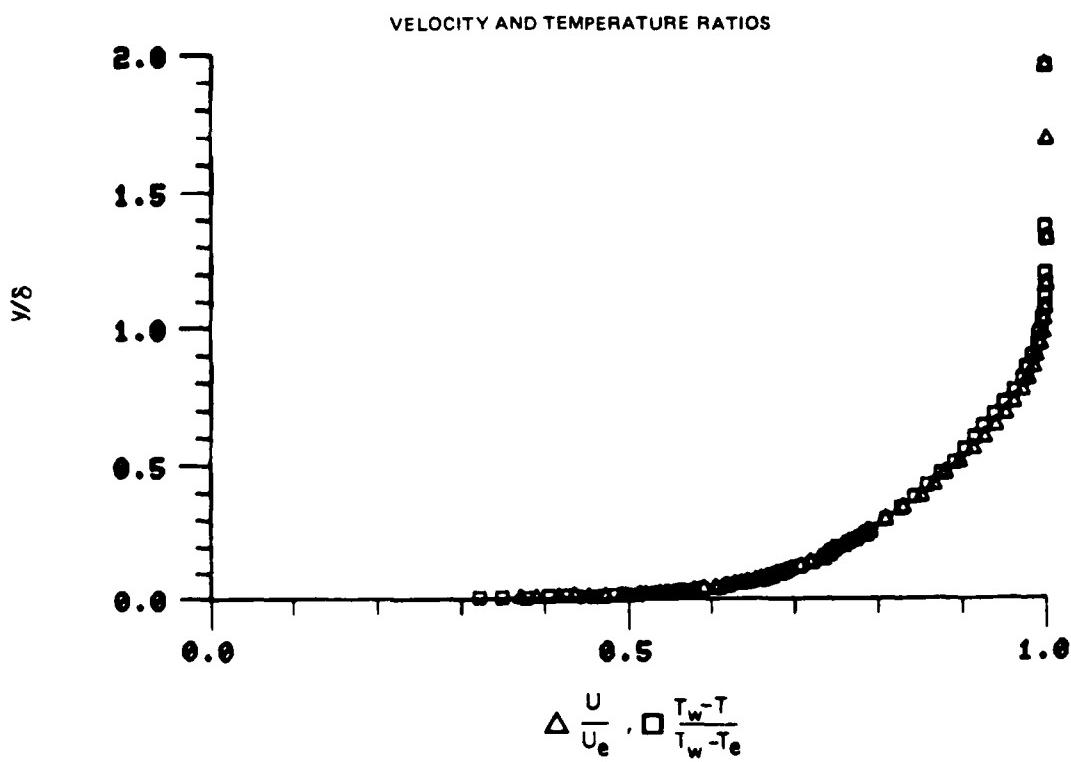


Figure 30. Boundary Layer Velocity and Temperature Profiles
Run No. 8 Point No. 21

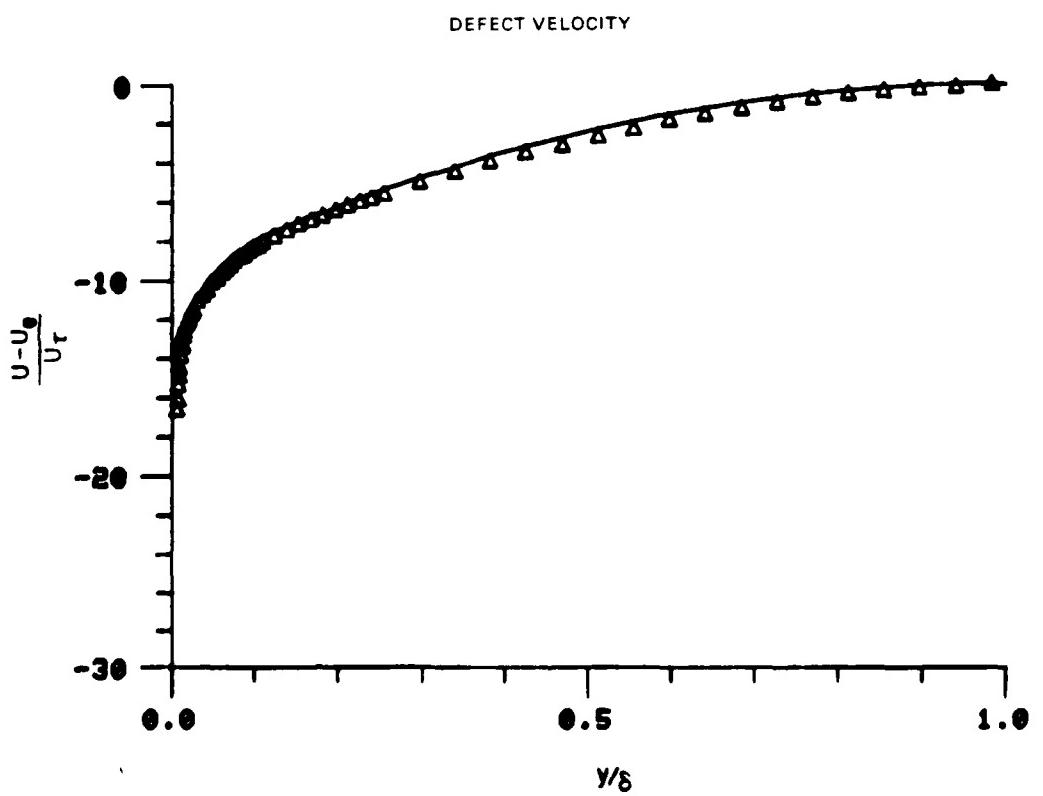
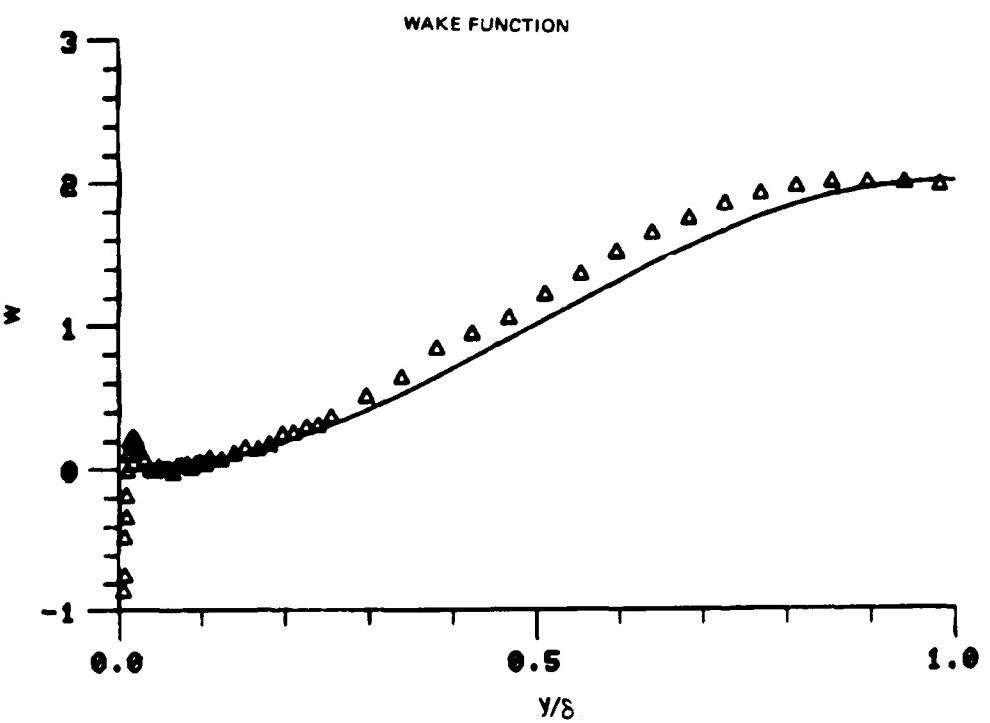


Figure 30. Boundary Layer Velocity Profiles
Run No.8 Point No.21

78-12-100-2

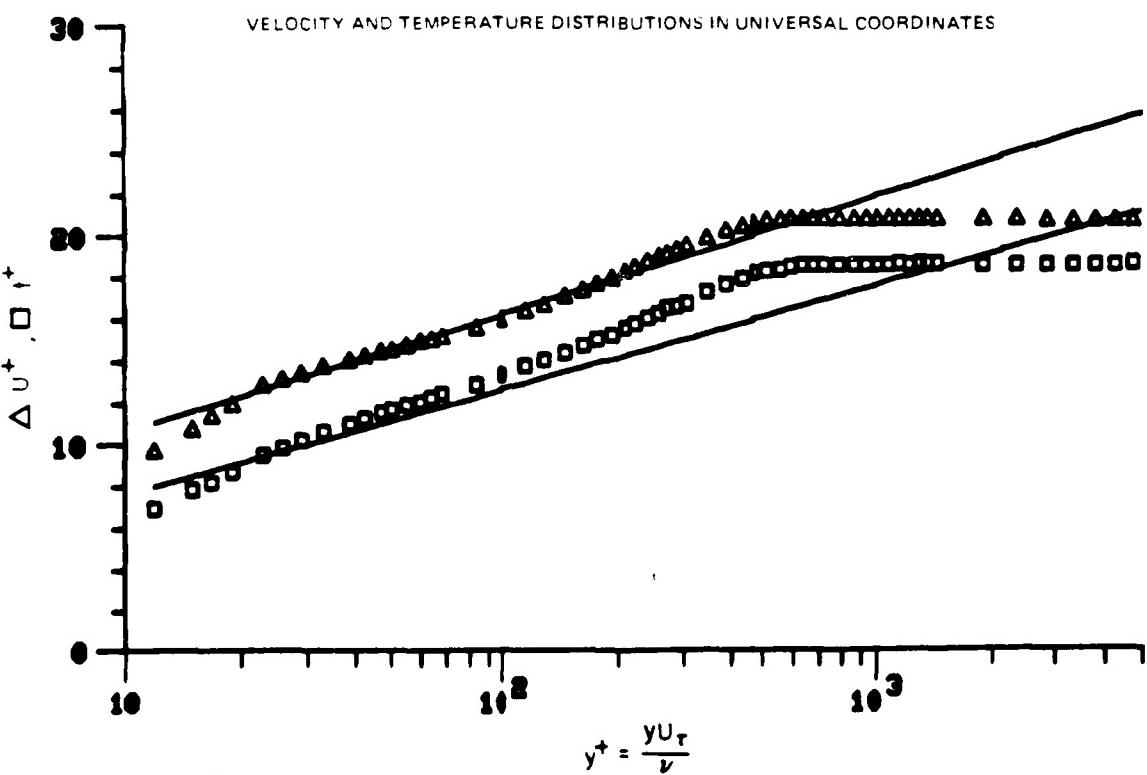
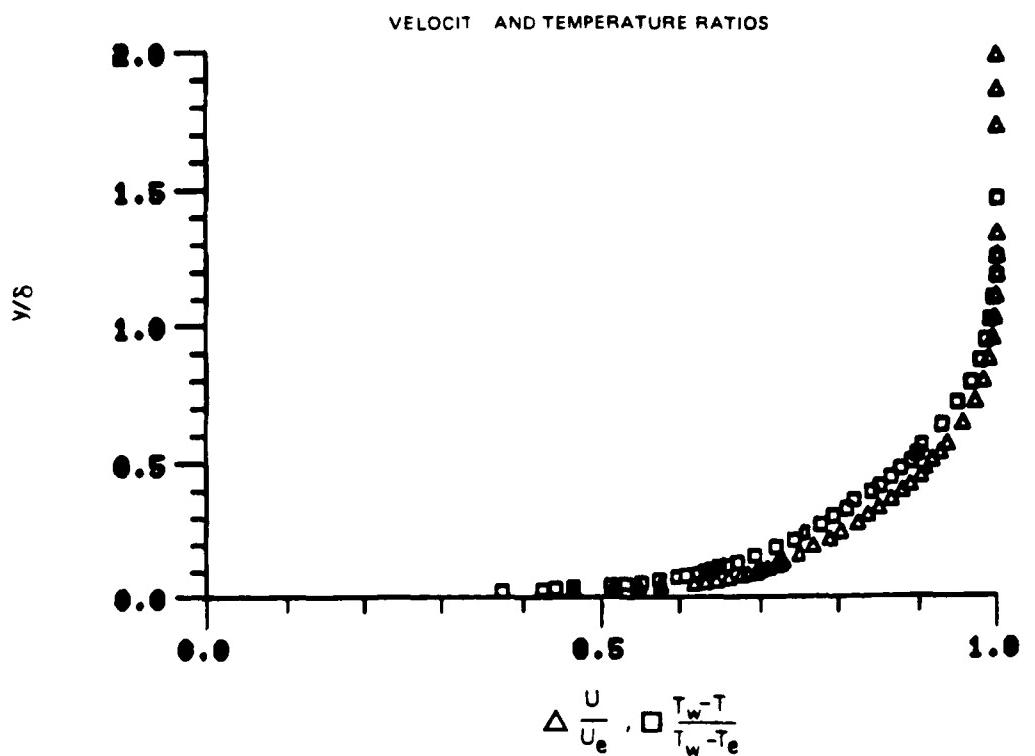


Figure 31. Boundary Layer Velocity and Temperature Profiles
Run No. 7 Point No. 3

78-12-100-1

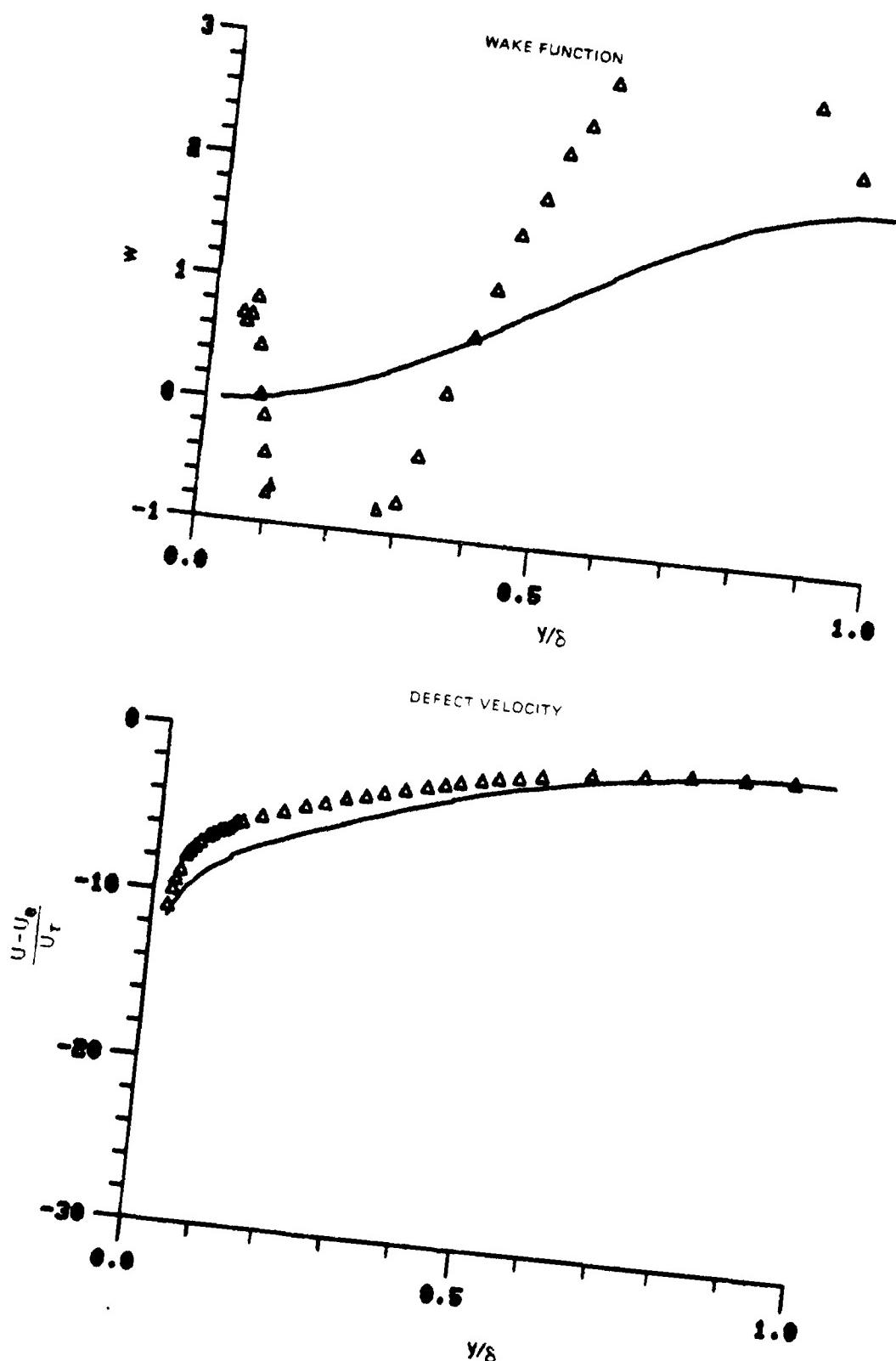


Figure 31. Boundary Layer Velocity Profiles
Run No. 7 Point No. 3

78-12-100-2

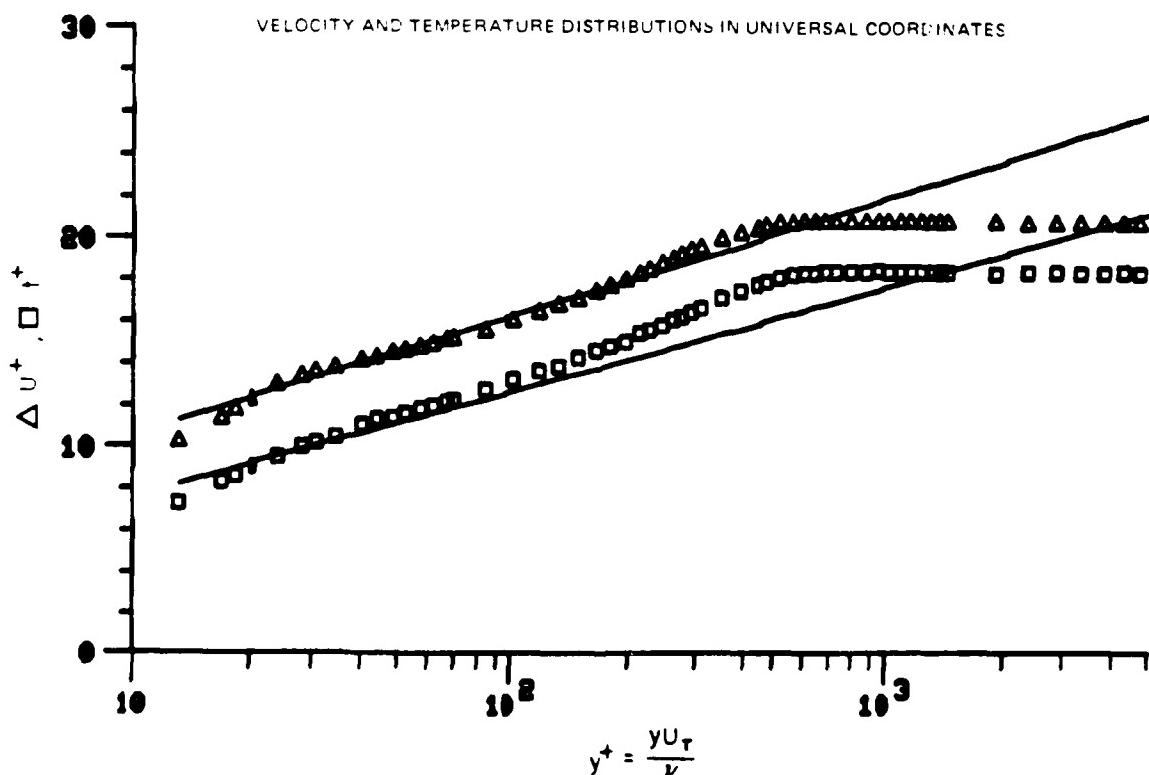
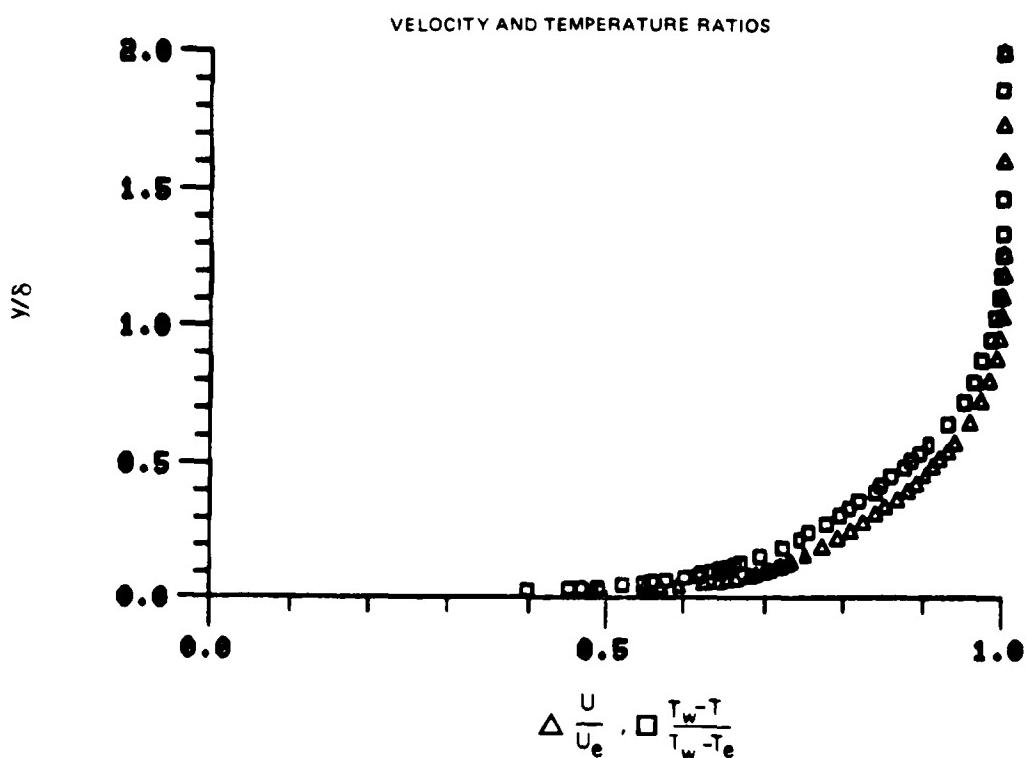


Figure 32. Boundary Layer Velocity and Temperature Profiles
Run No. 7 Point No. 4

78-12-100-1

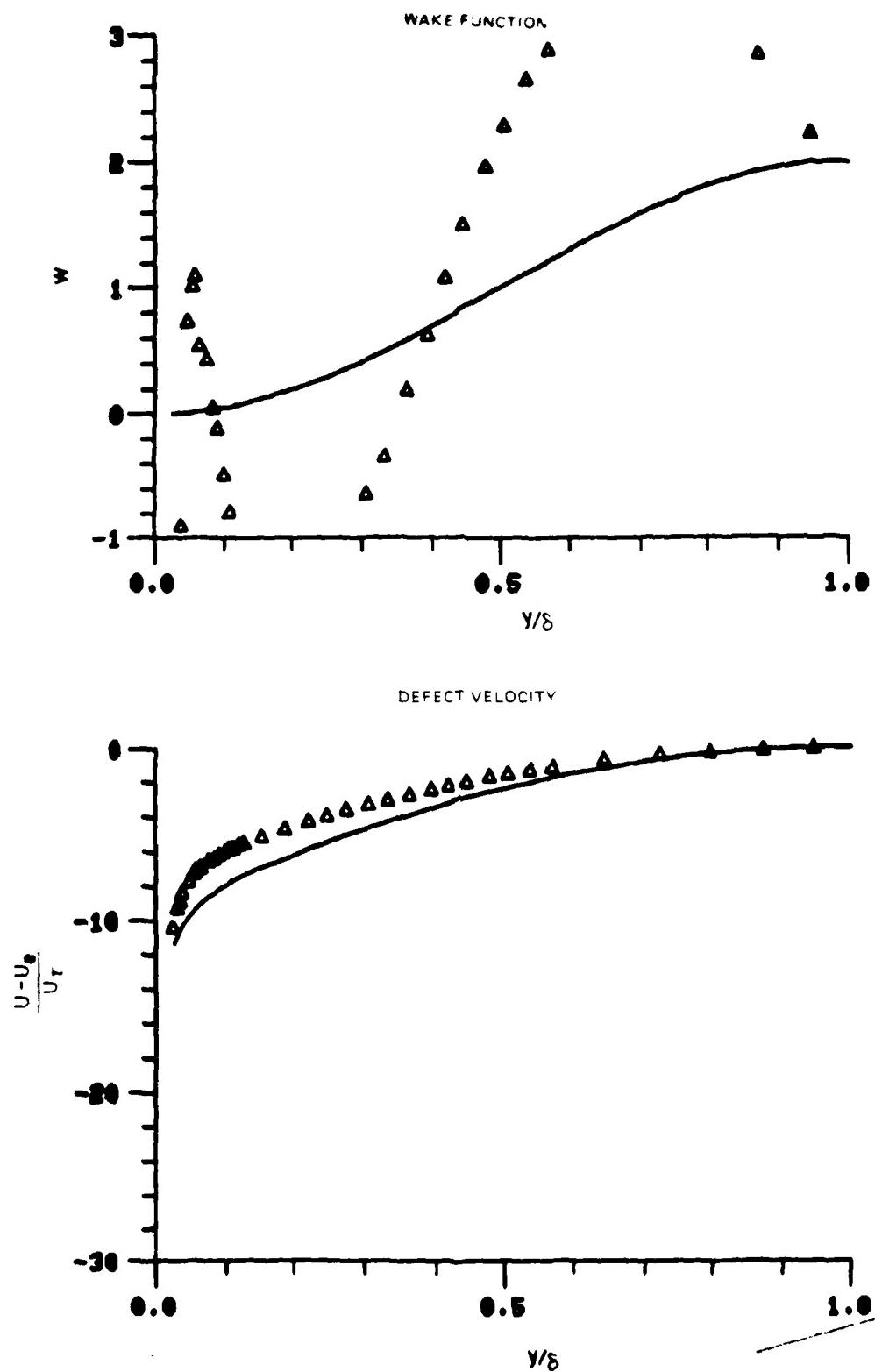


Figure 32. Boundary Layer Velocity Profiles
Run No.7 Point No.4

78-12-100-2

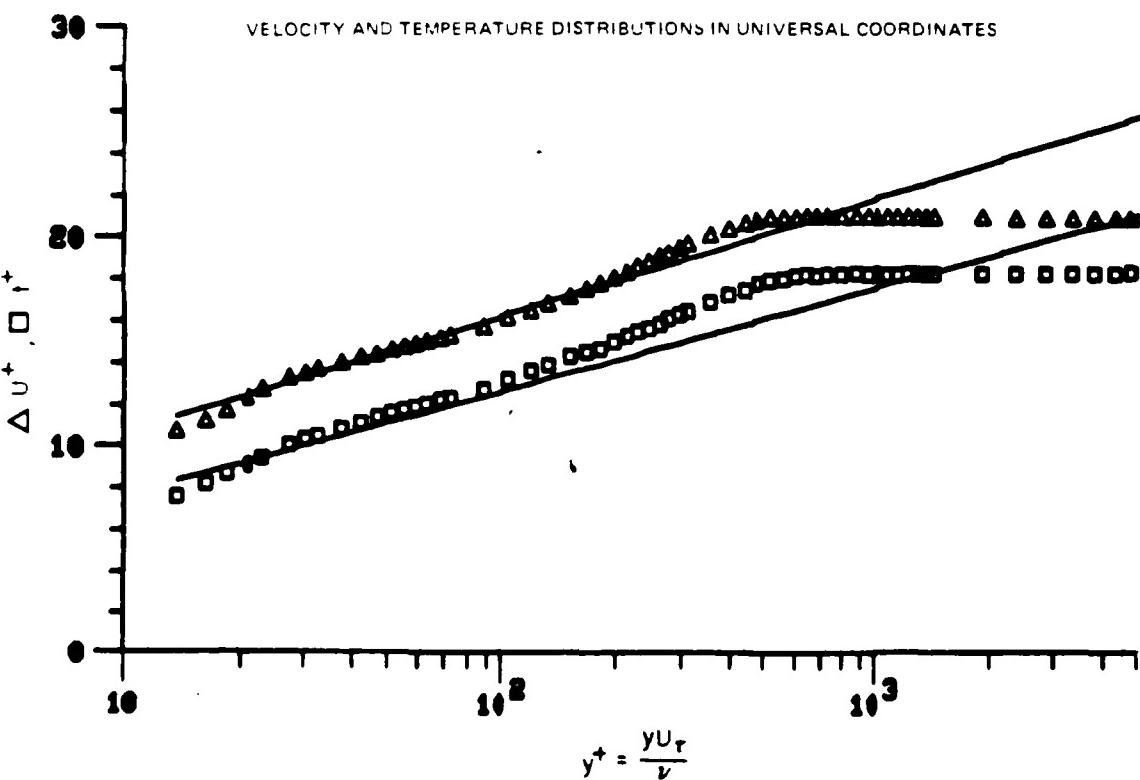
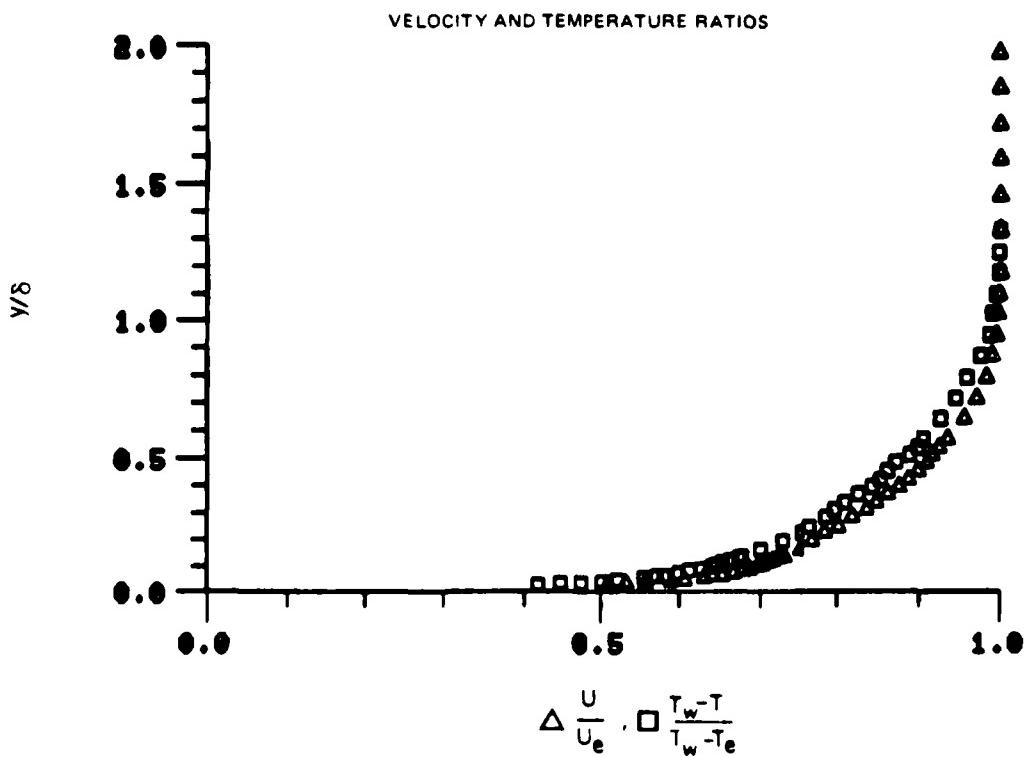


Figure 33. Boundary Layer Velocity and Temperature Profiles
Run No.7 Point No.5

78-12-100-1

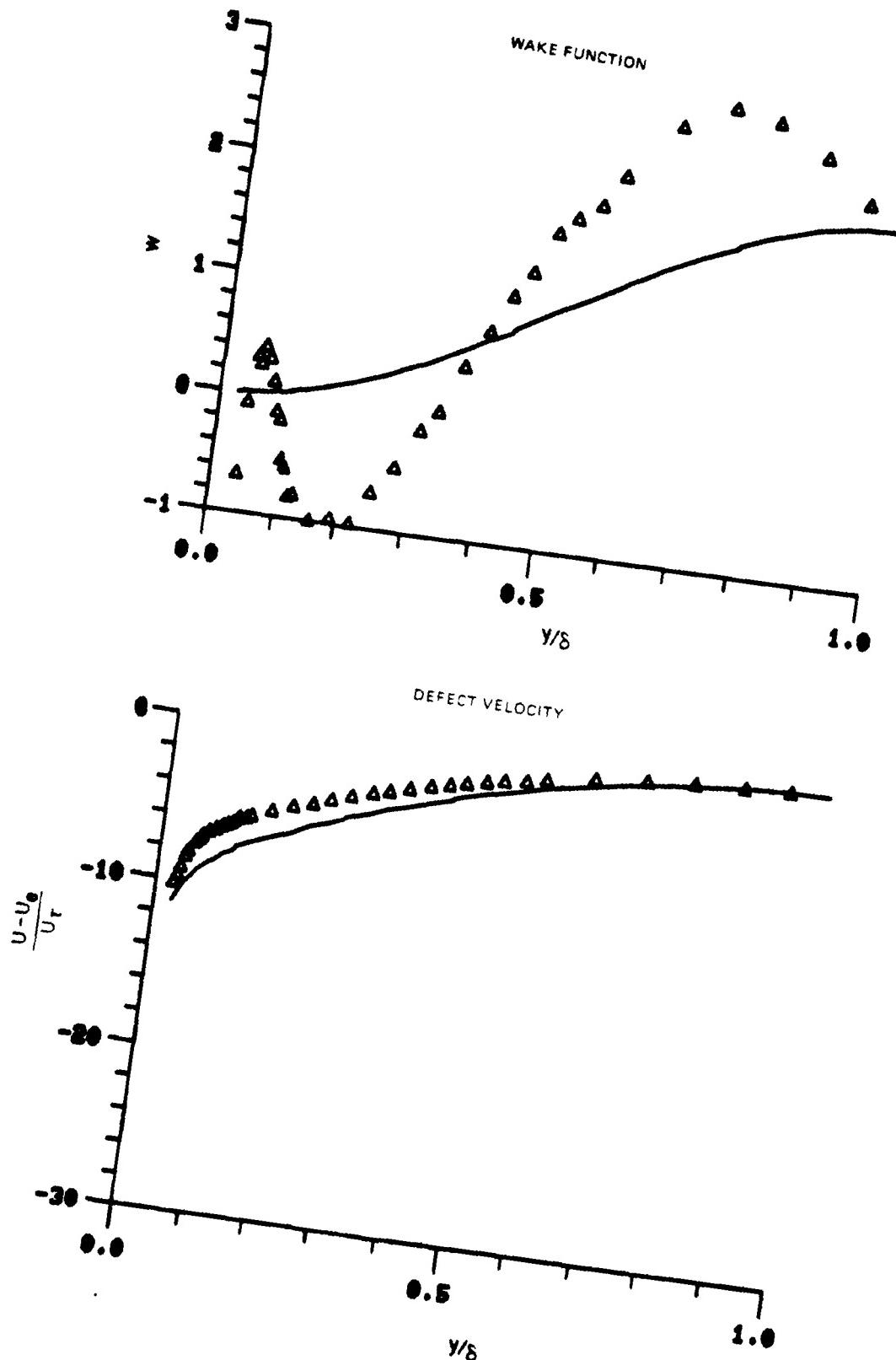


Figure 33. Boundary Layer Velocity Profiles
Run No. 7 Point No. 5

78-12-100-2

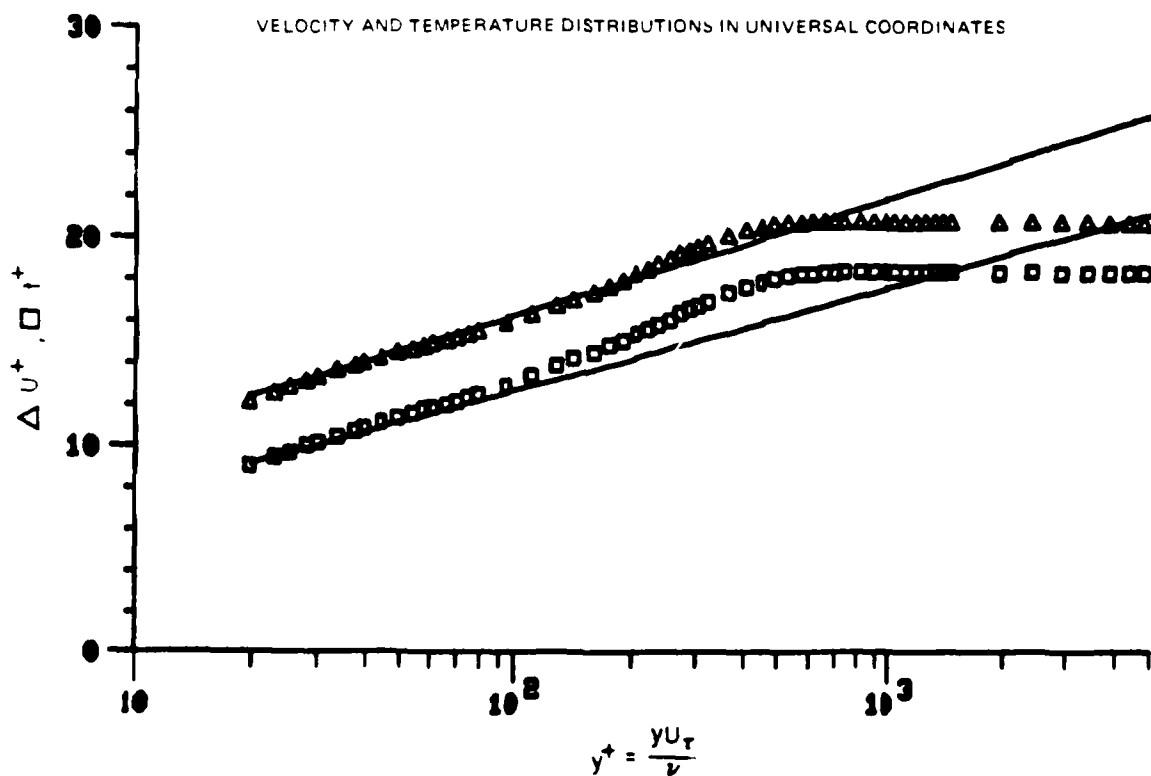
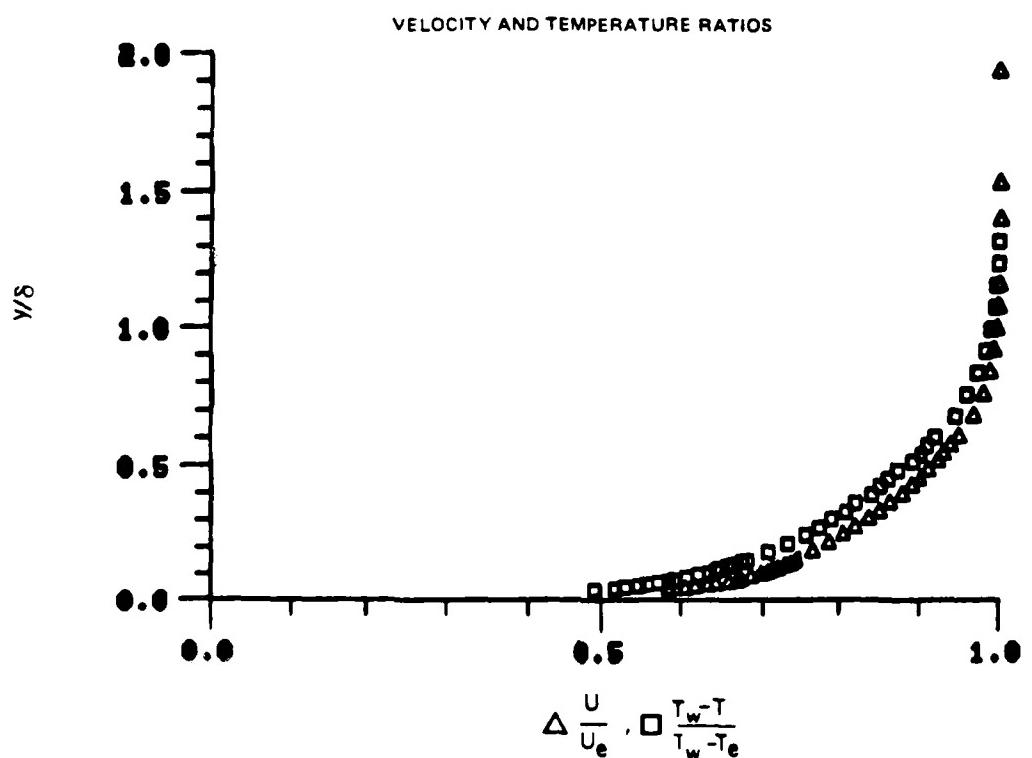


Figure 34. Boundary Layer Velocity and Temperature Profiles
Run No. 7 Point No. 6

78-12-100-1

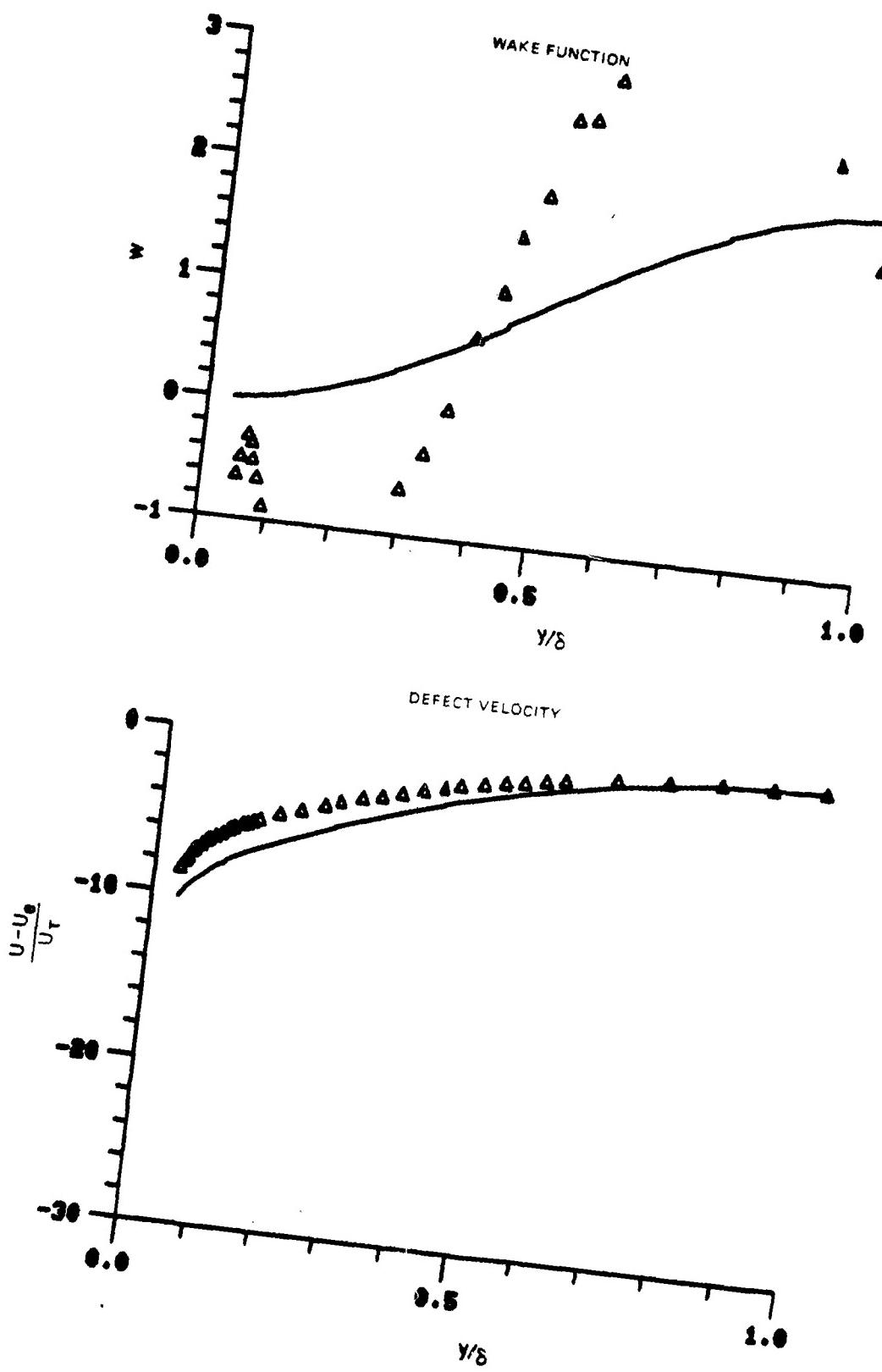


Figure 34. Boundary Layer Velocity Profiles
Run No. 7 Point No. 6

78-12-100-2

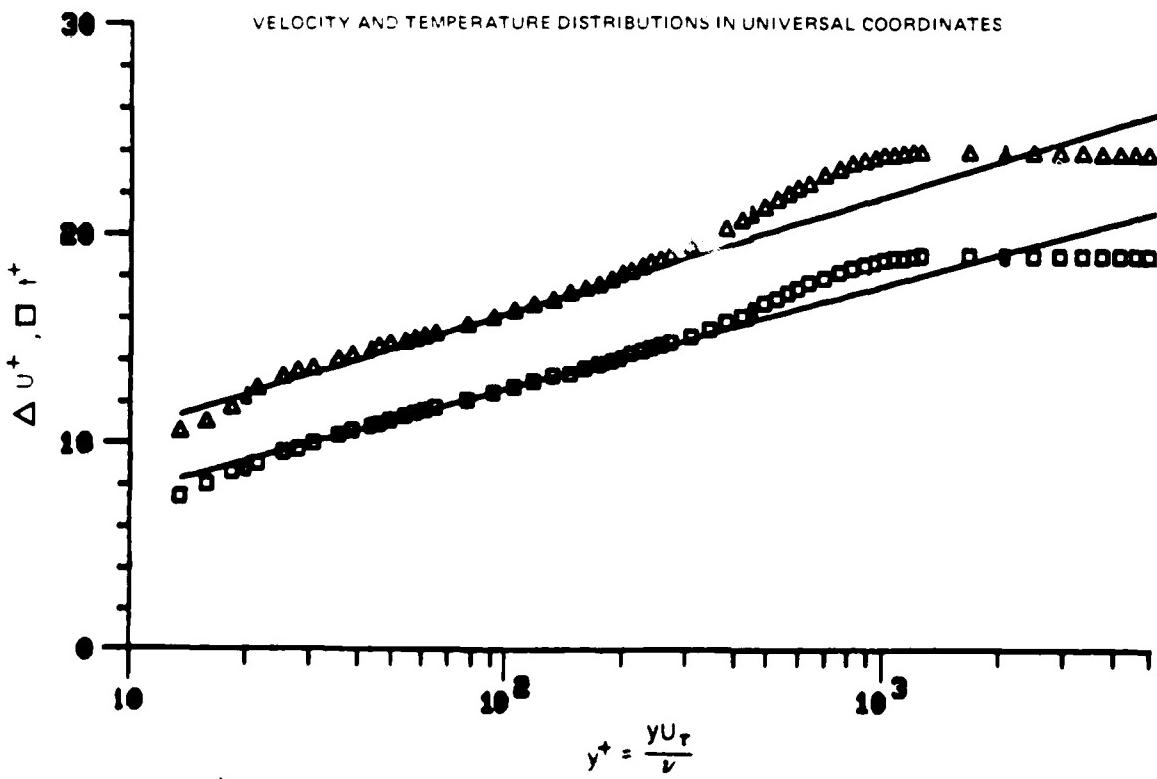
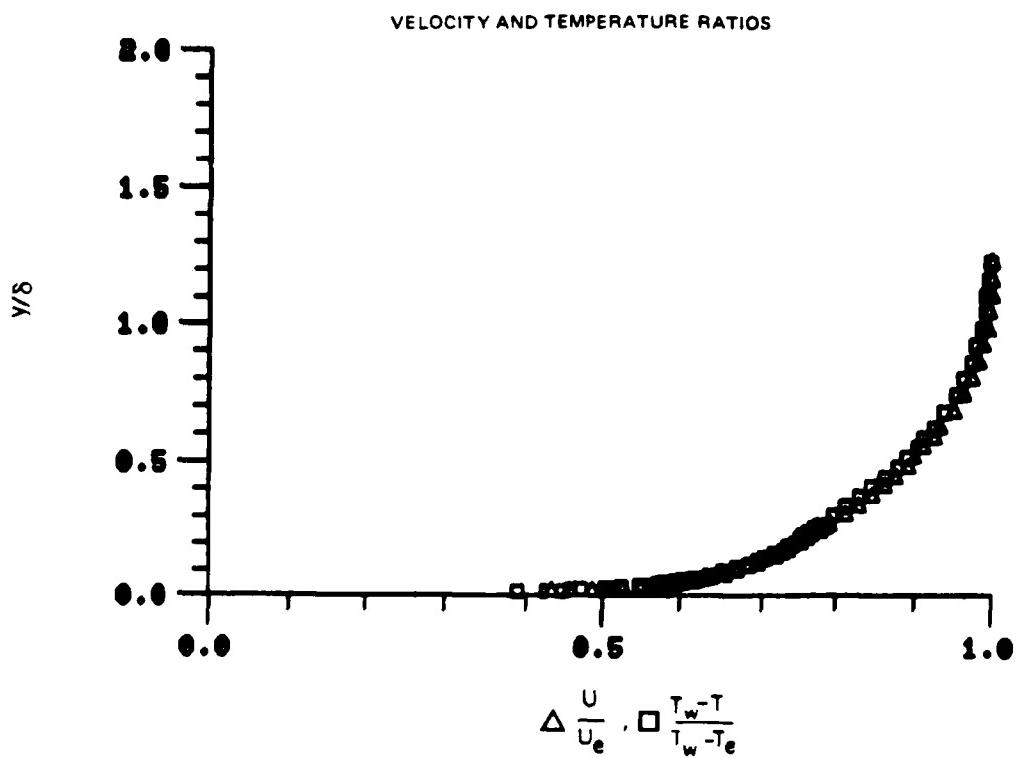


Figure 35. Boundary Layer Velocity and Temperature Profiles
Run No.7 Point No.8

78-12-100-1

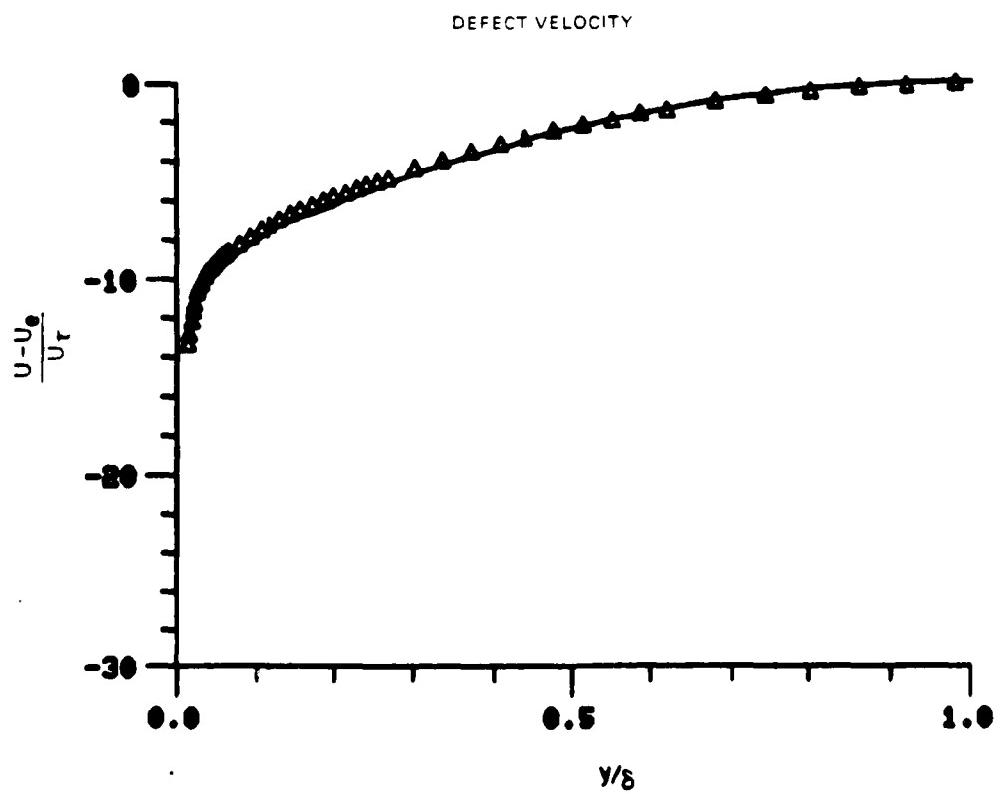
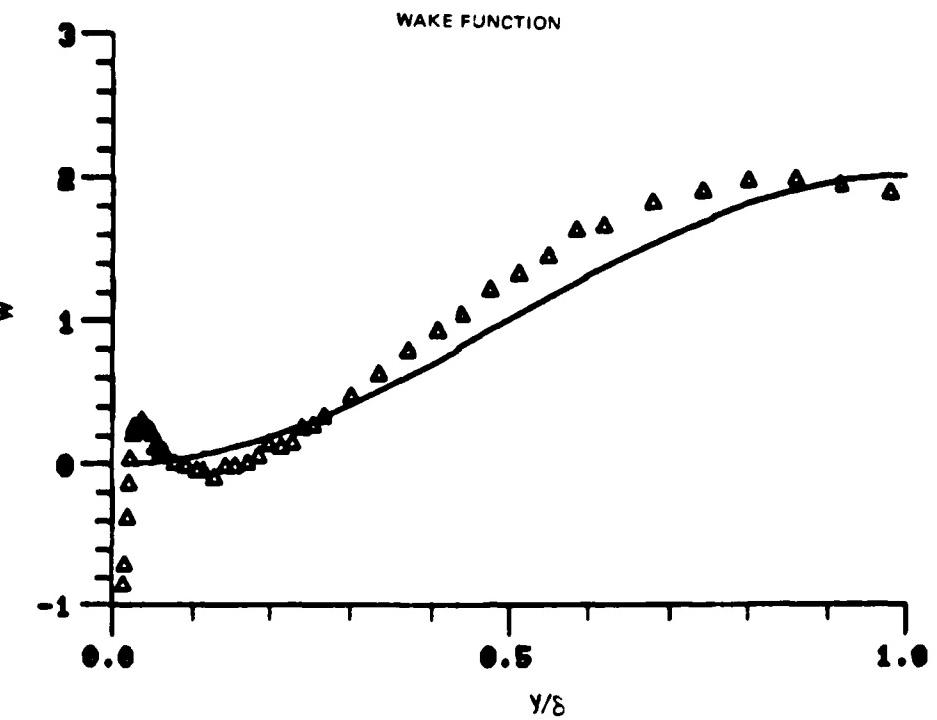


Figure 35. Boundary Layer Velocity Profiles
Run No. 7 Point No. 8

78-12-100-2

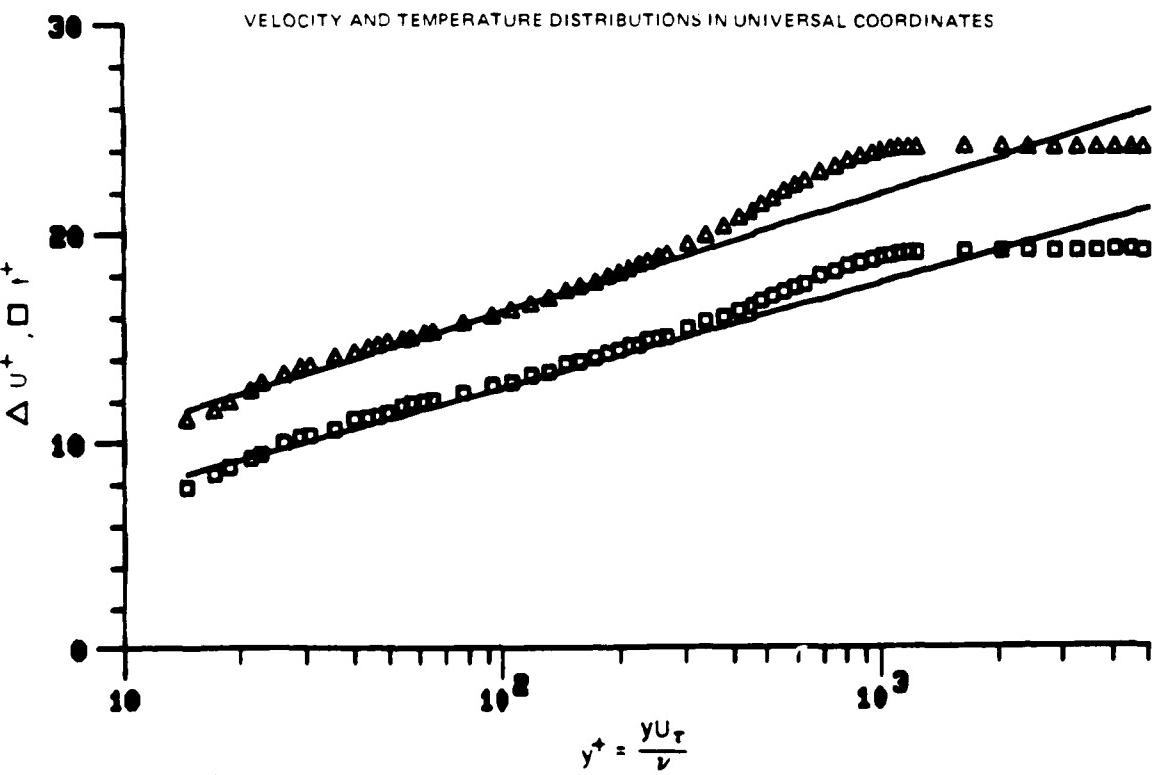
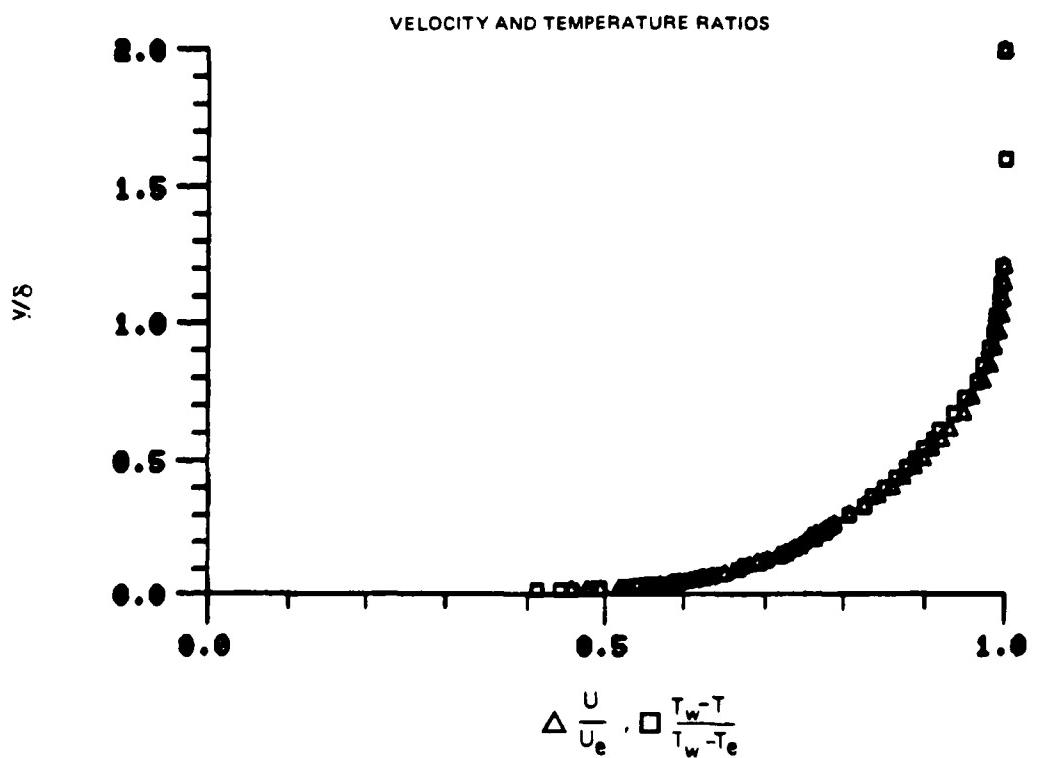


Figure 36. Boundary Layer Velocity and Temperature Profiles
Run No. 7 Point No. 9

78-12-100-1

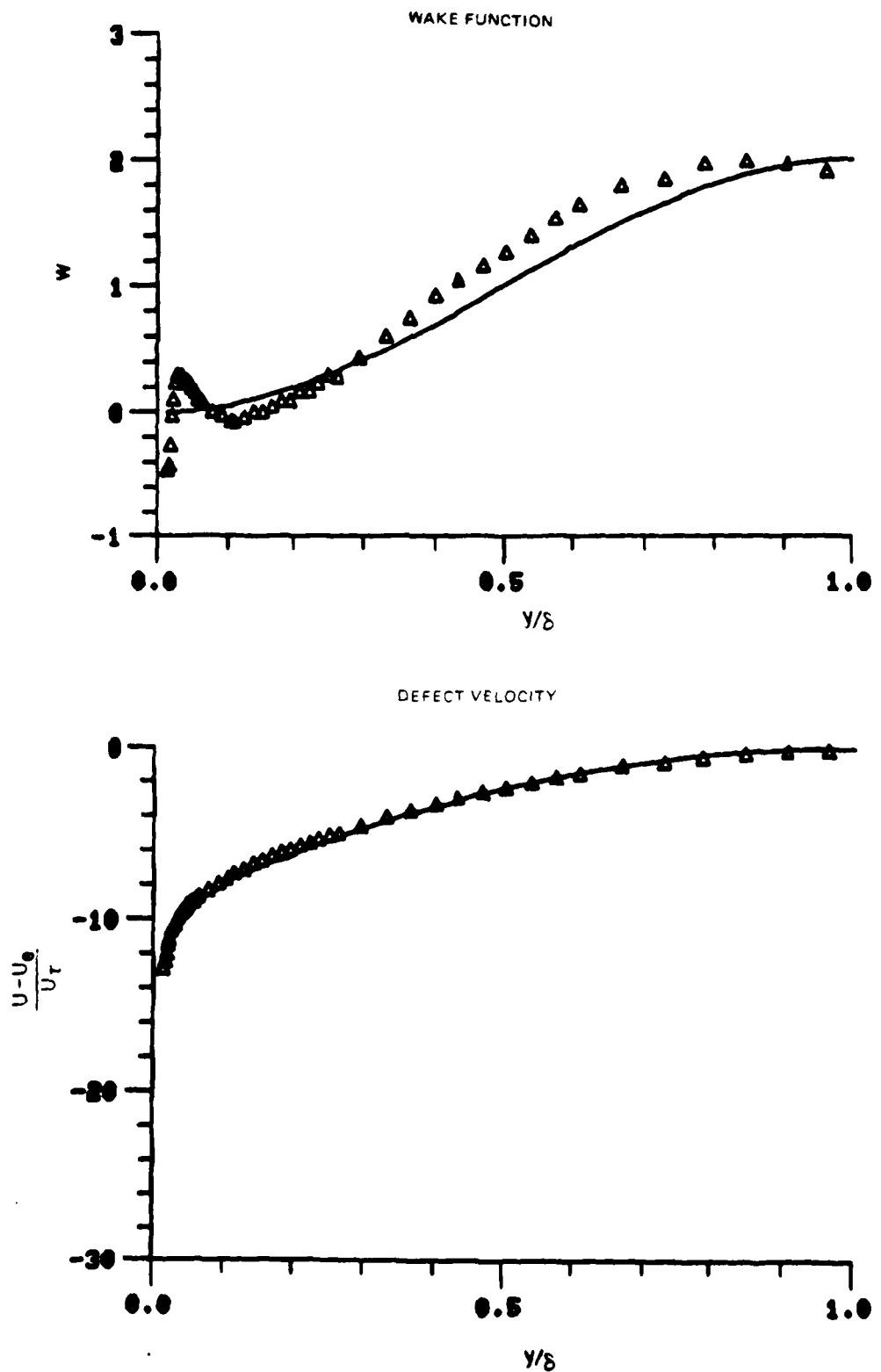


Figure 36. Boundary Layer Velocity Profiles
Run No. 7 Point No. 9

78-12-100-2

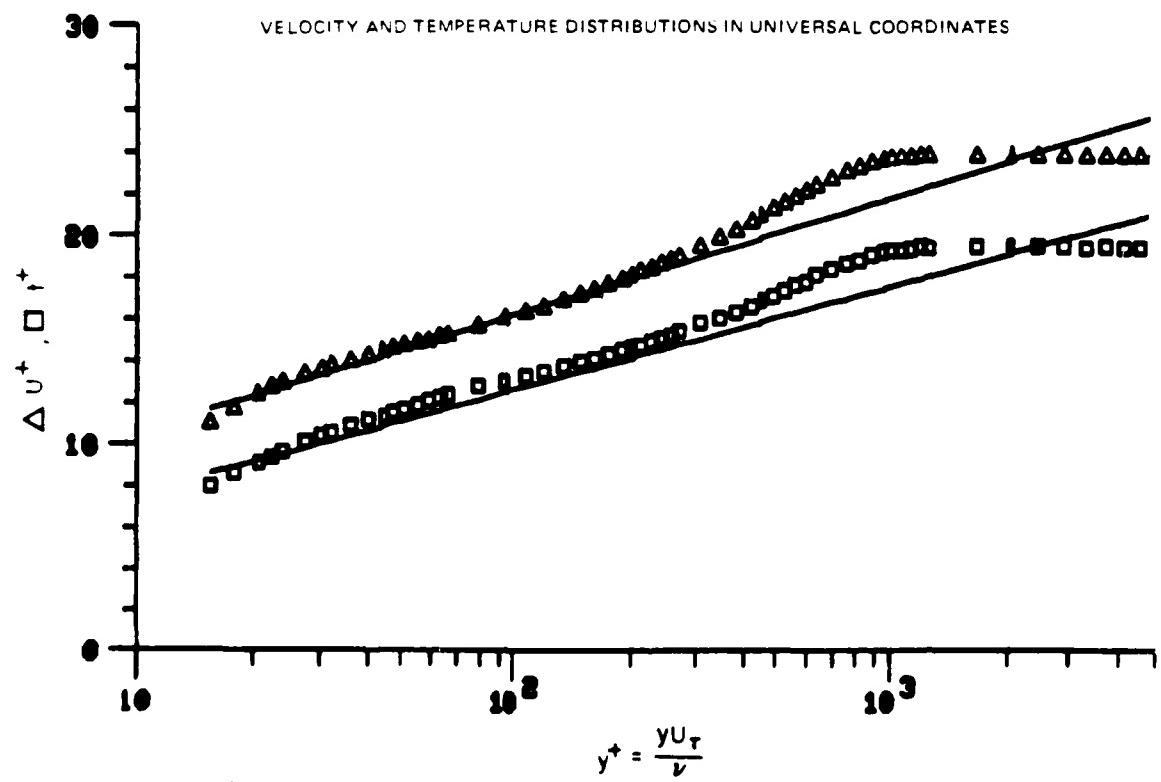
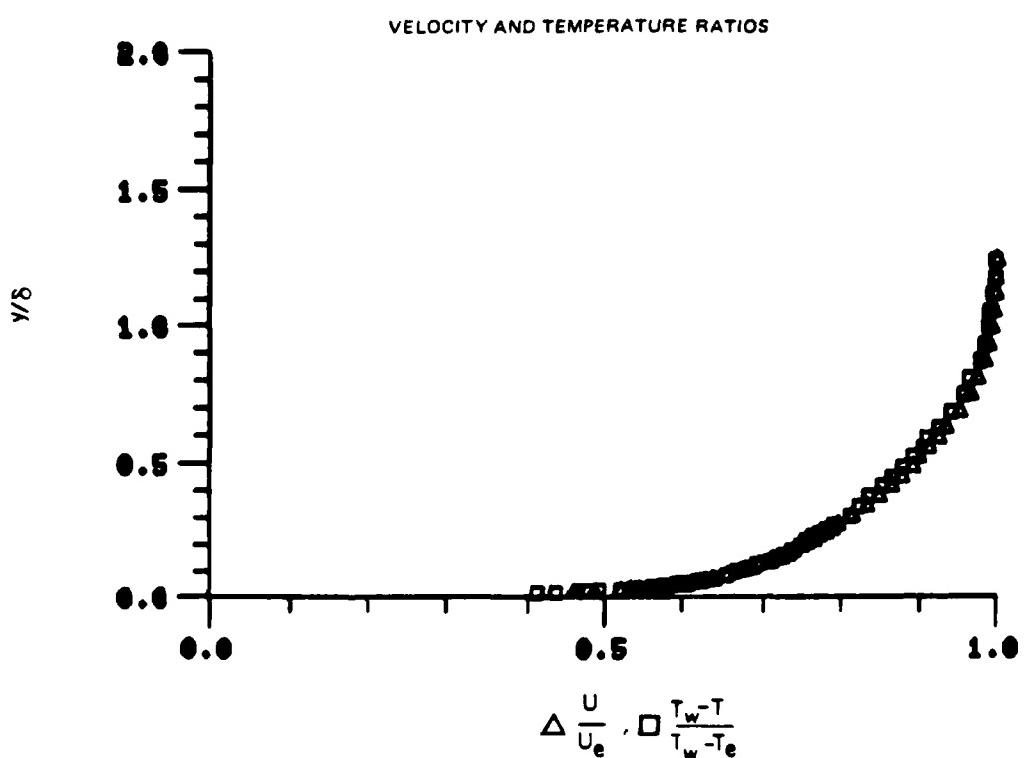


Figure 37. Boundary Layer Velocity and Temperature Profiles
Run No.7 Point No.10

78-12-100-1

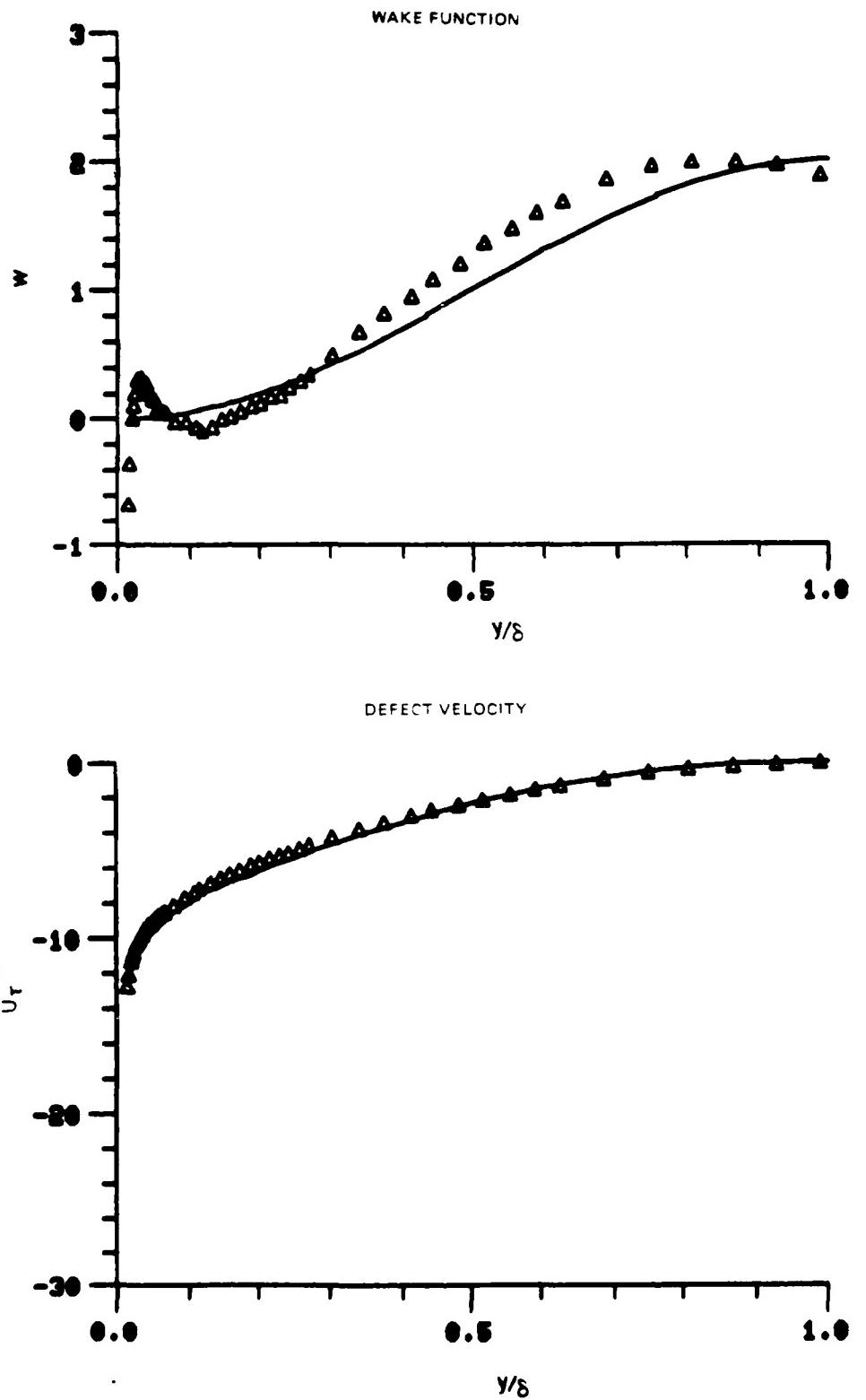


Figure 37. Boundary Layer Velocity Profiles
Run No.7 Point No.10

78-12-100-2

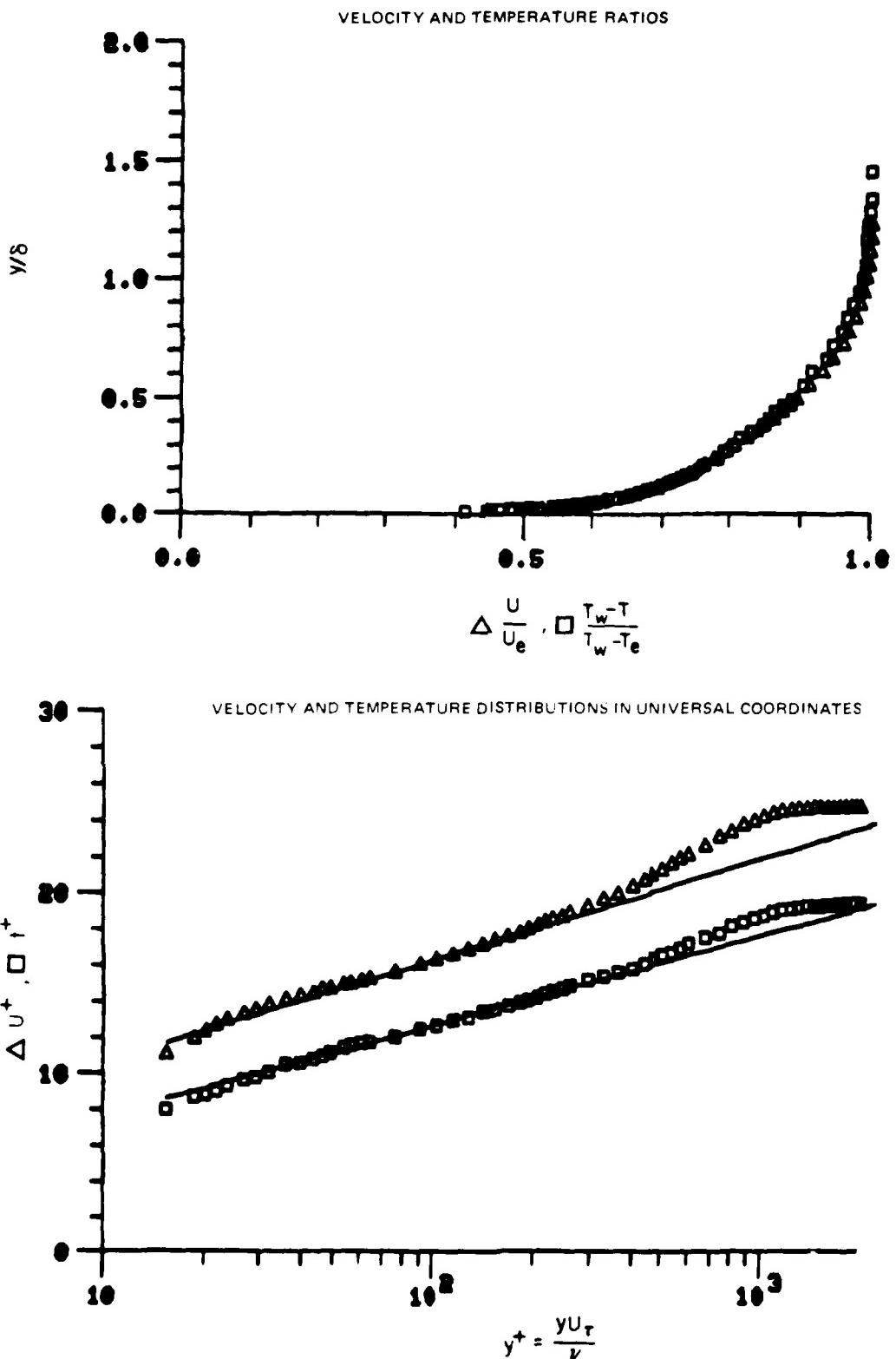


Figure 38. Boundary Layer Velocity and Temperature Profiles
Run No.7 Point No.11

78-12-100-1

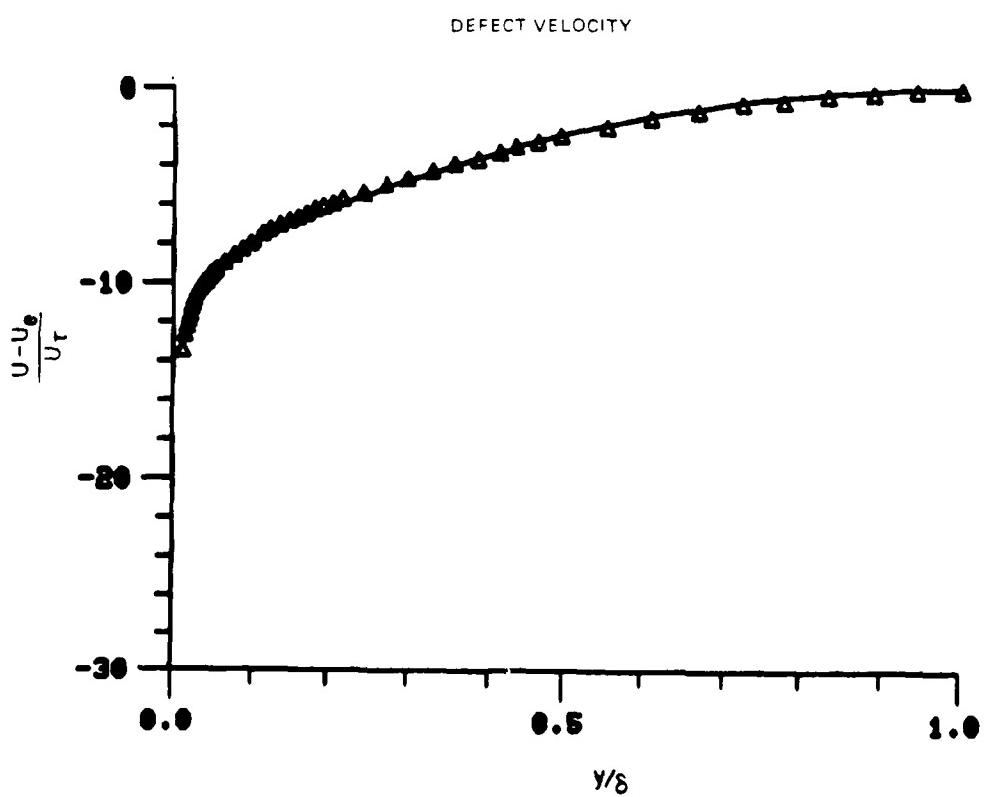
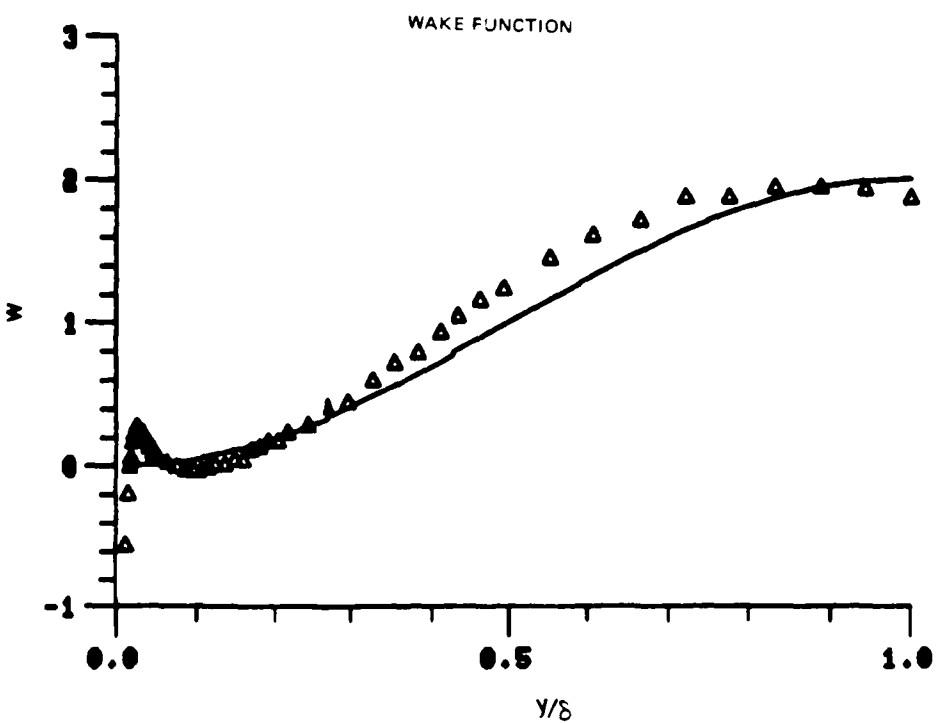


Figure 38. Boundary Layer Velocity Profiles
Run No. 7 Point No. 11

78-12-100-2

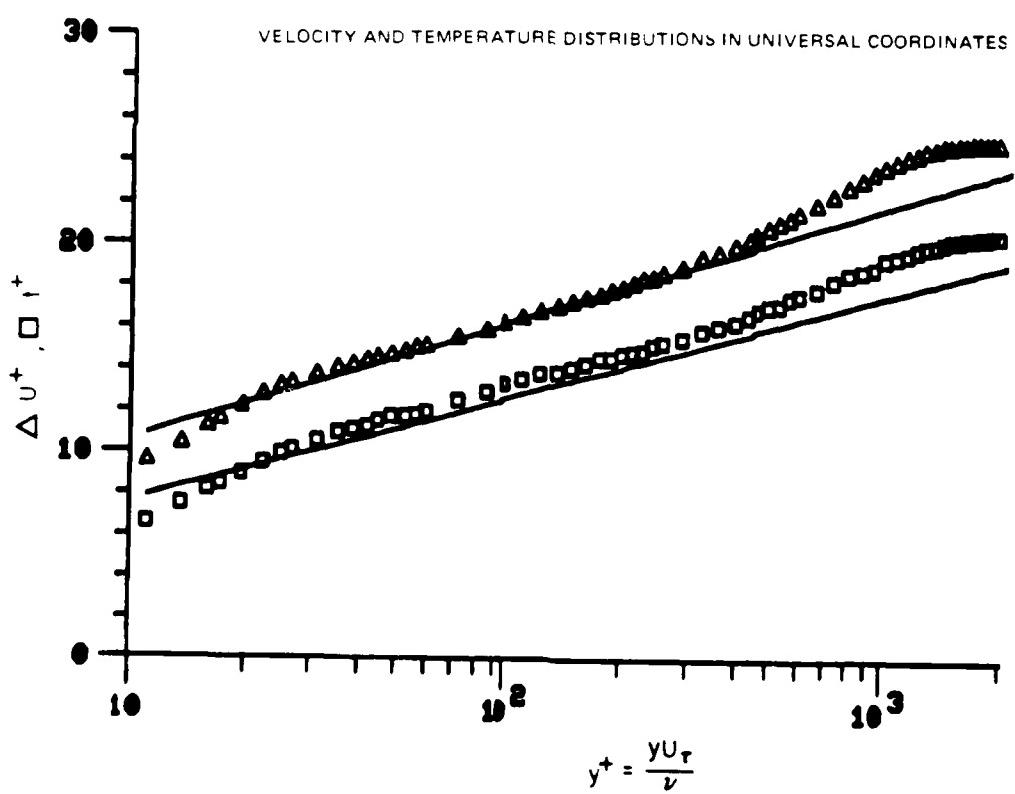
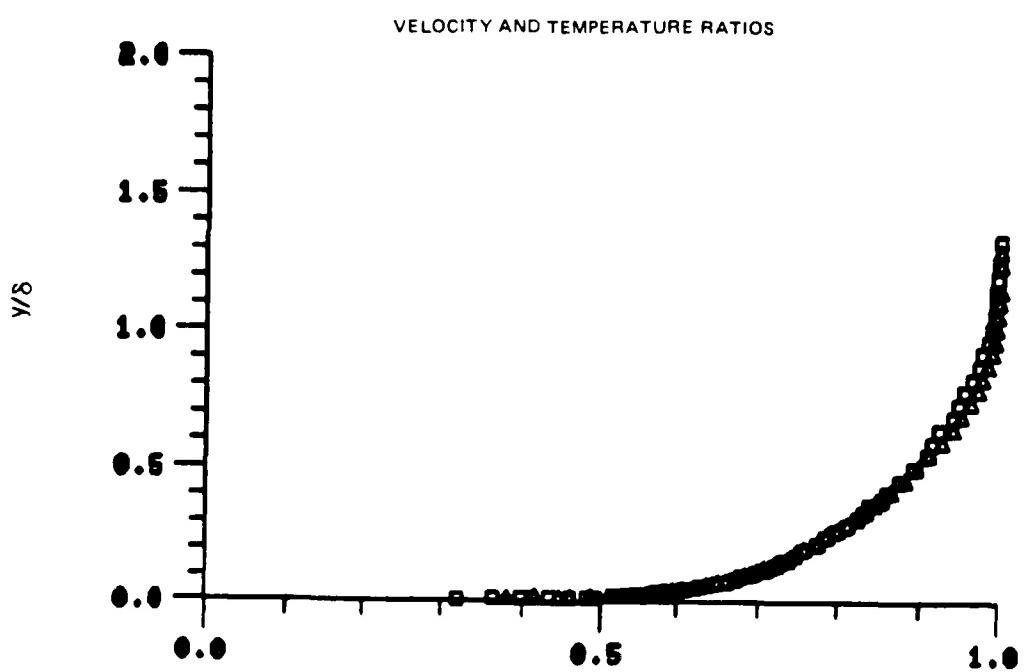


Figure 39. Boundary Layer Velocity and Temperature Profiles
Run No. 7 Point No.1?

78-12-100-1

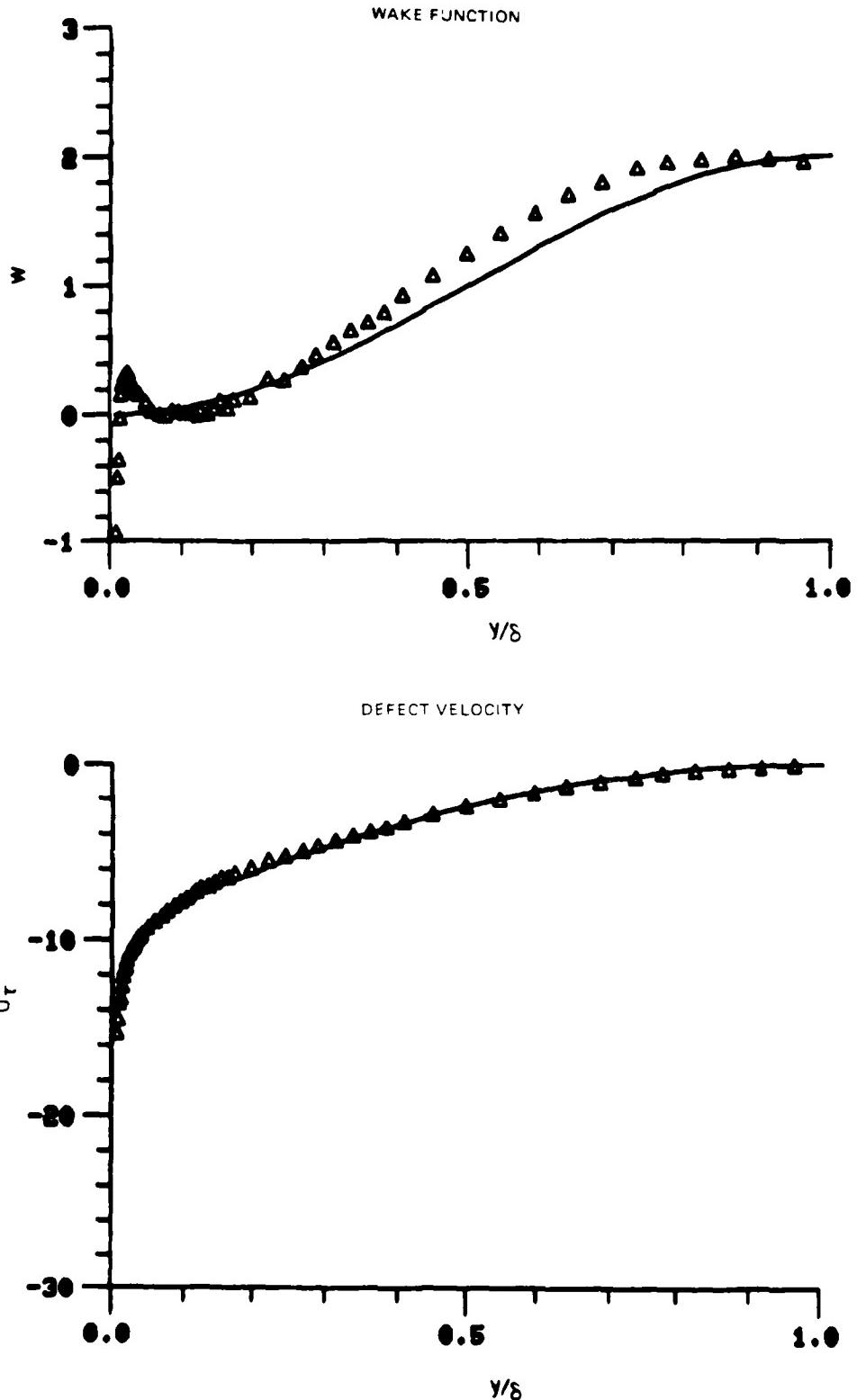


Figure 39. Boundary Layer Velocity Profiles
Run No. 7 Point No. 12

7B-12-100-2

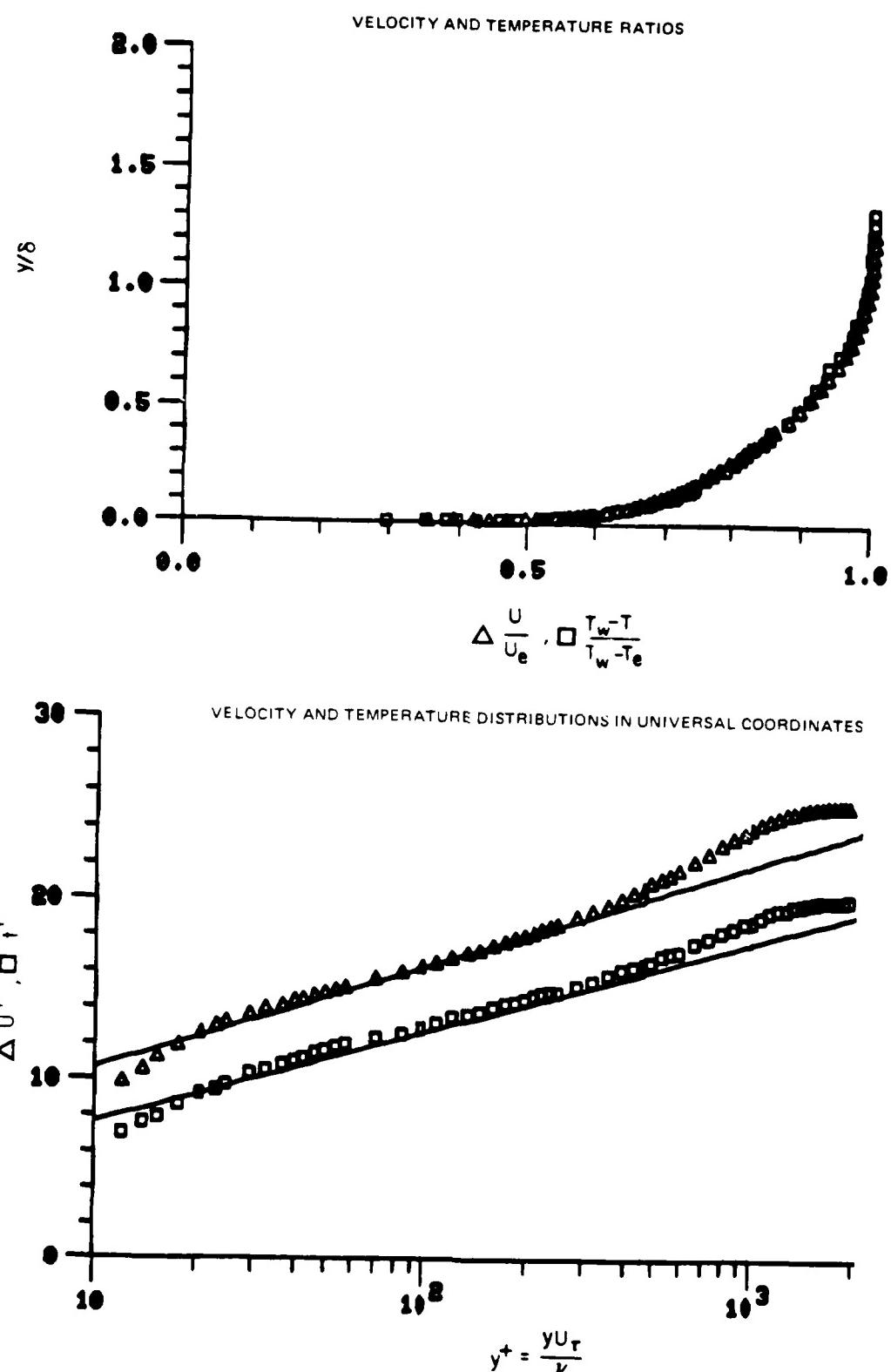


Figure 40. Boundary Layer Velocity and Temperature Profiles
Run No. 7 Point No. 13

78-12-100-1

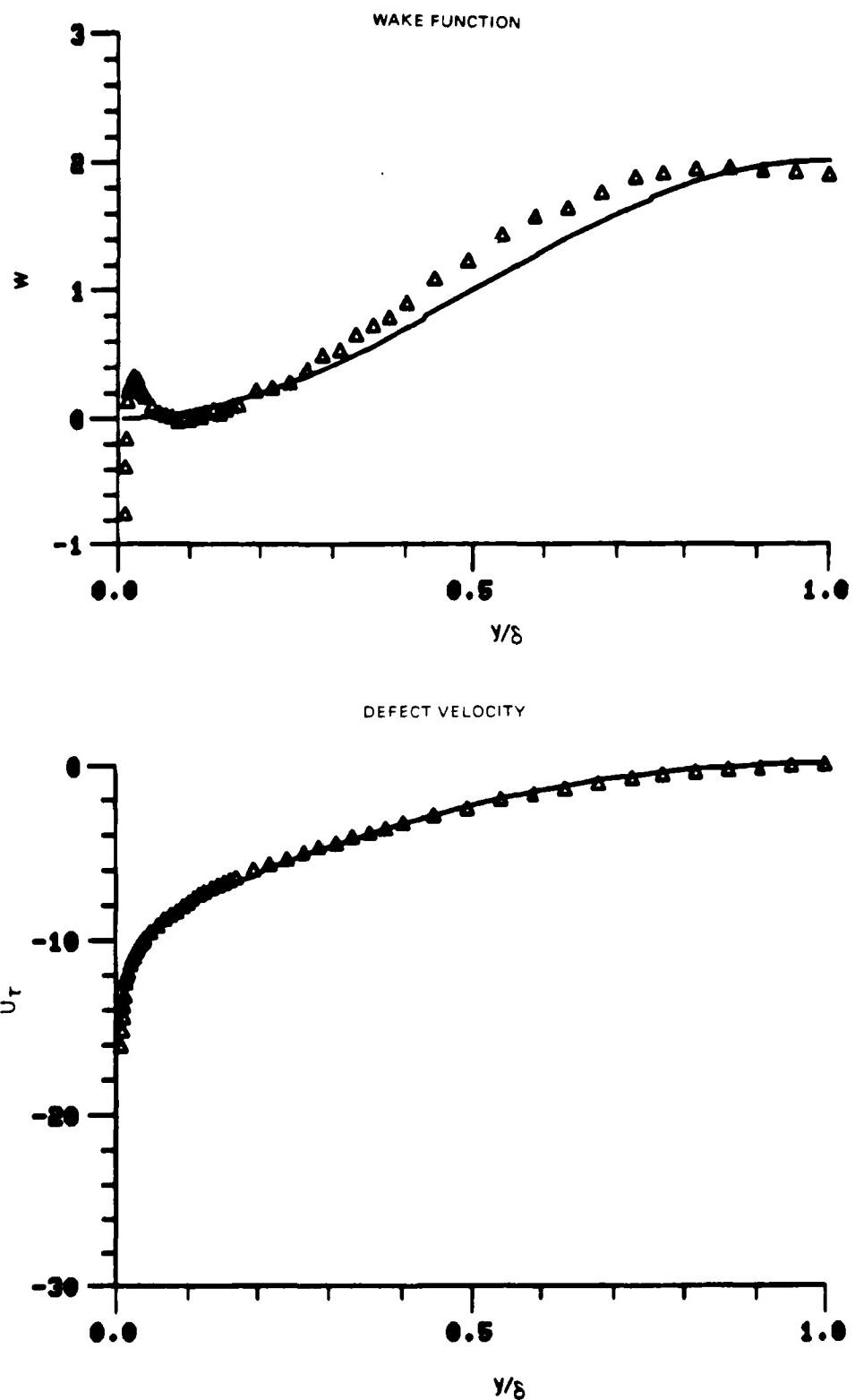


Figure 40. Boundary Layer Velocity Profiles
Run No. 7 Point No. 13

78-12-100-2

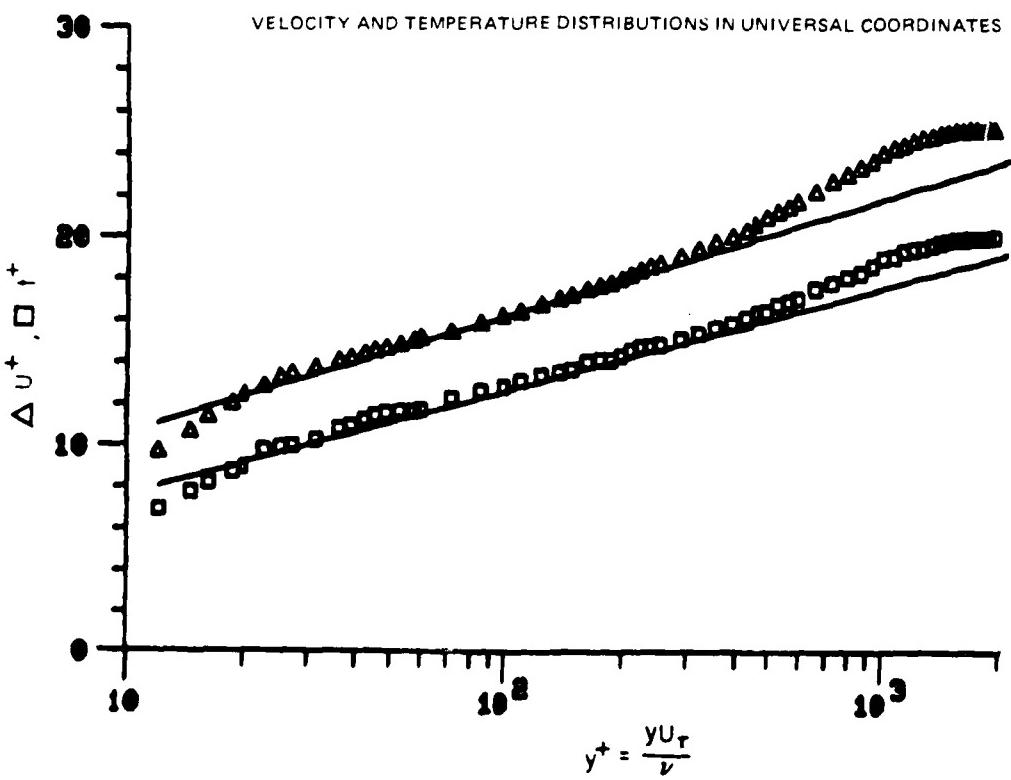
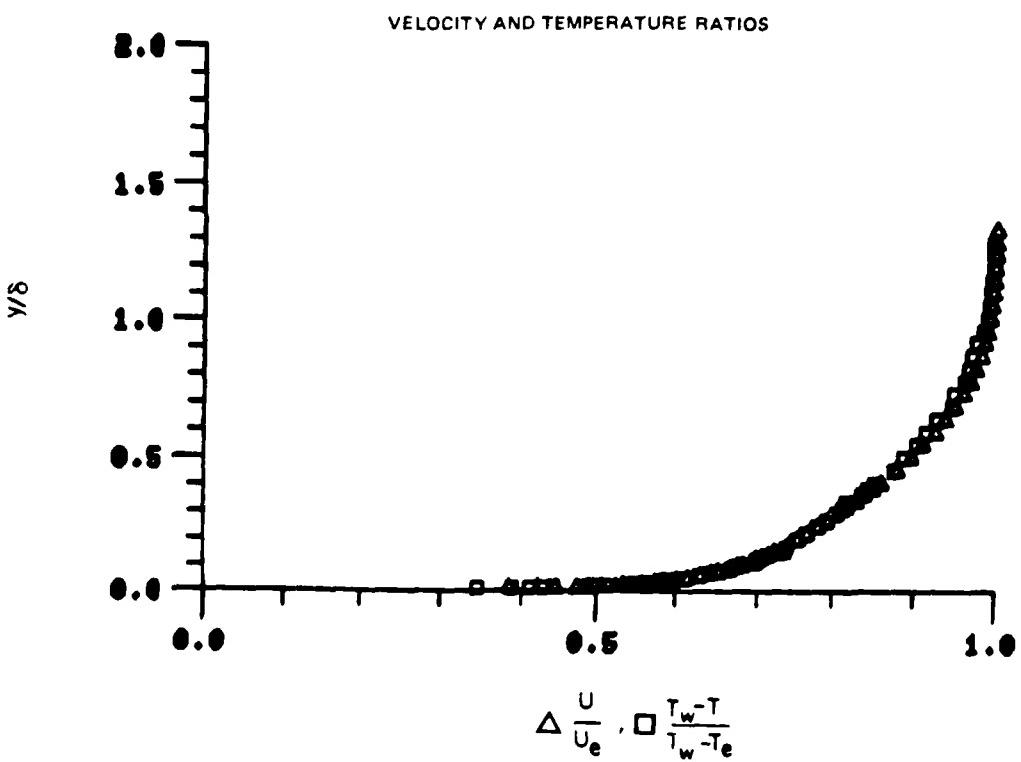


Figure 41. Boundary Layer Velocity and Temperature Profiles
Run No. 7 Point No. 14

78-12-100-1

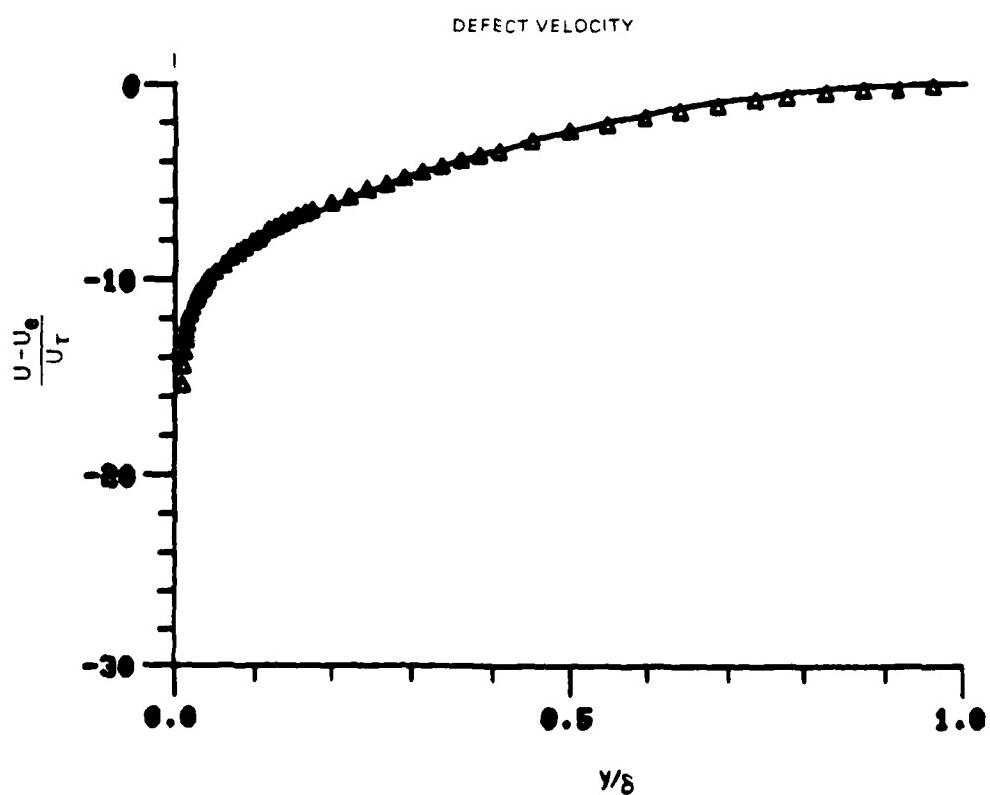
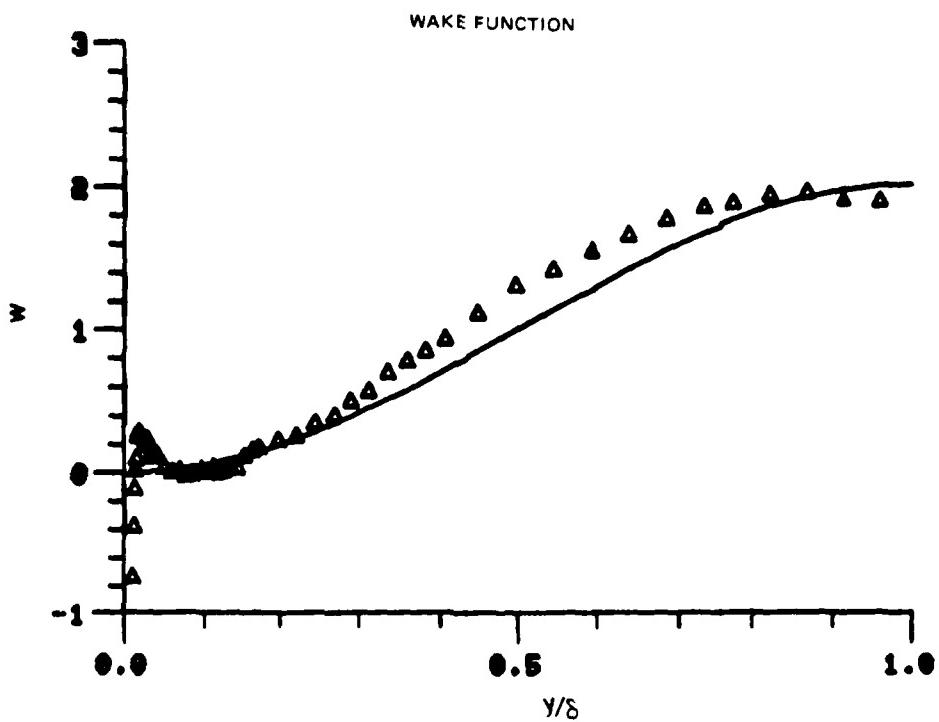
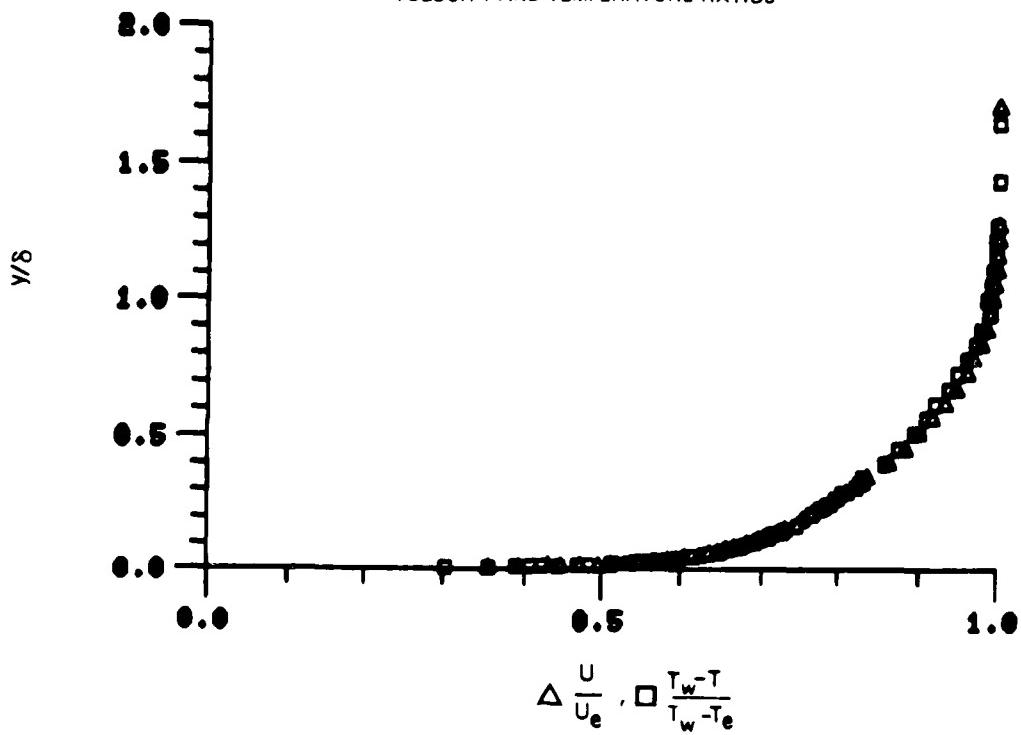


Figure 41. Boundary Layer Velocity Profiles
Run No. 7 Point No. 14

78-17-100-2

VELOCITY AND TEMPERATURE RATIOS



VELOCITY AND TEMPERATURE DISTRIBUTIONS IN UNIVERSAL COORDINATES

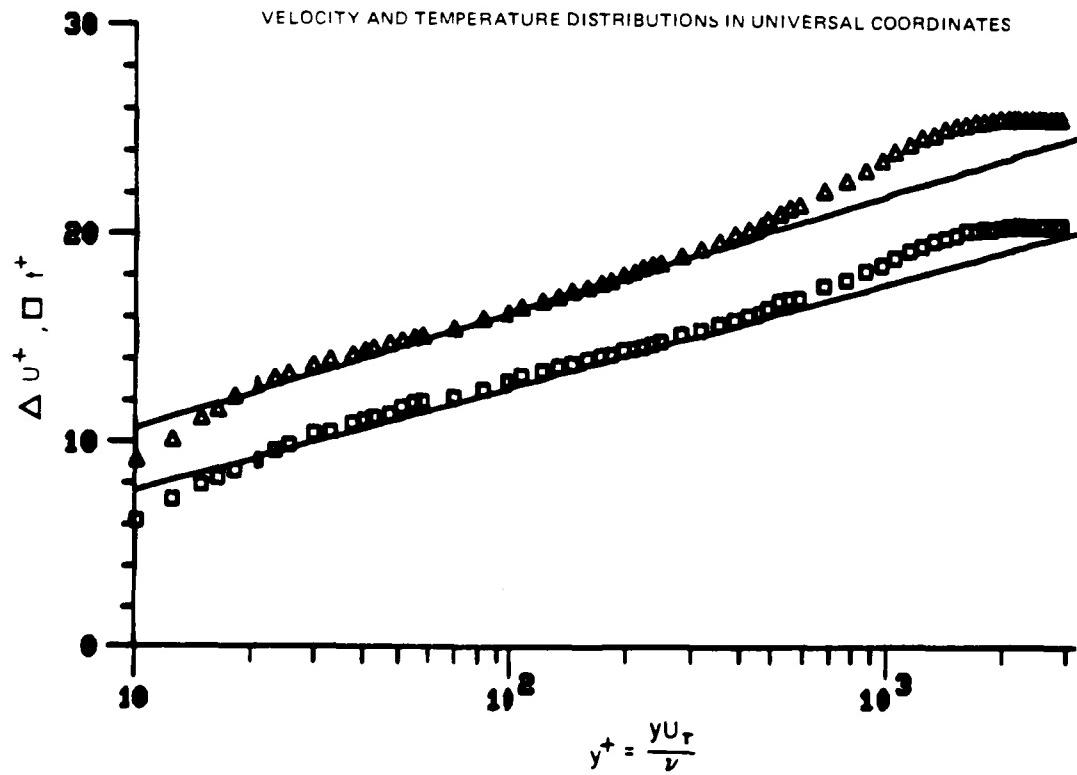


Figure 42. Boundary Layer Velocity and Temperature Profiles
Run No.7 Point No.15

78-12-100-1

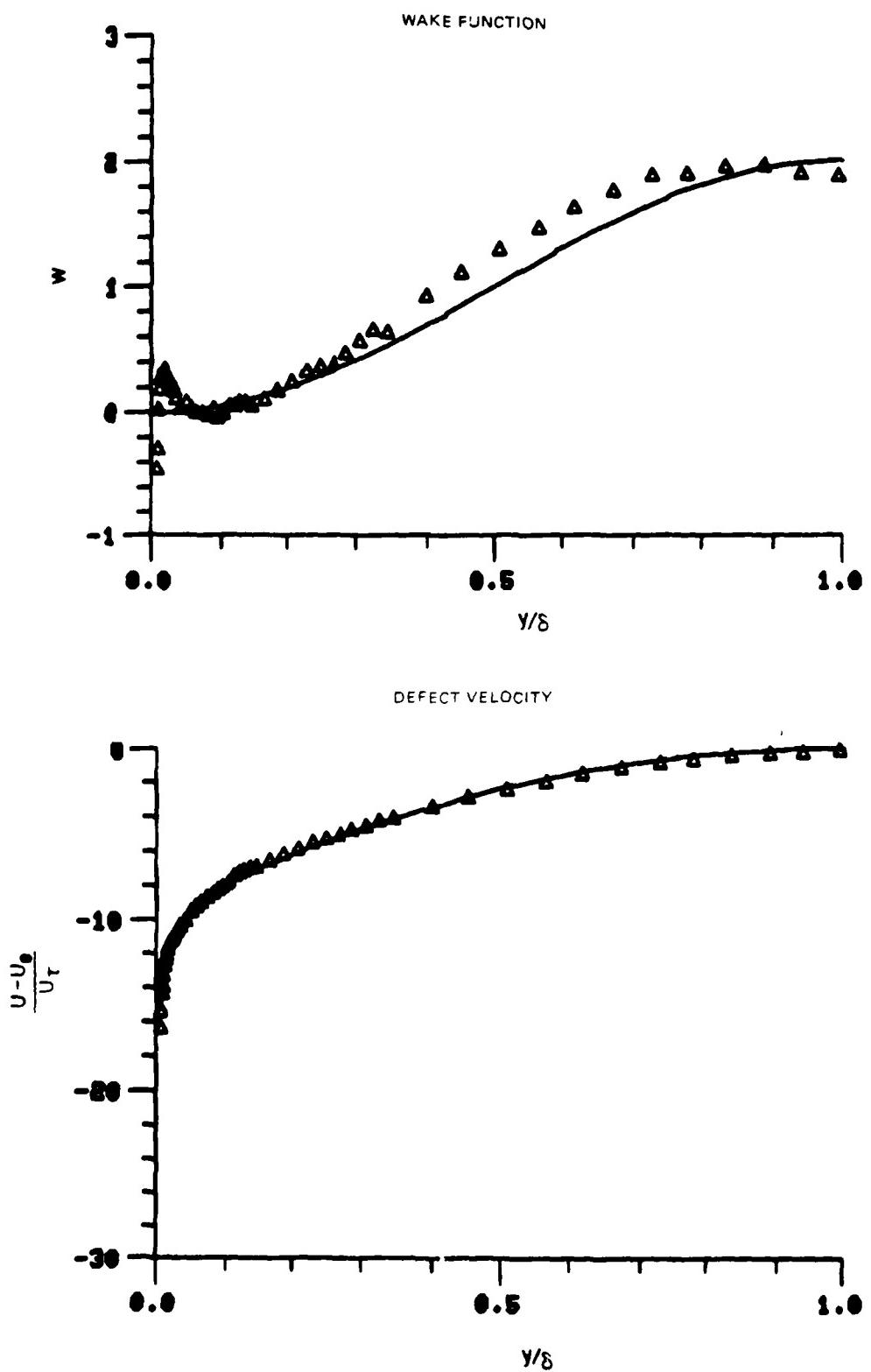
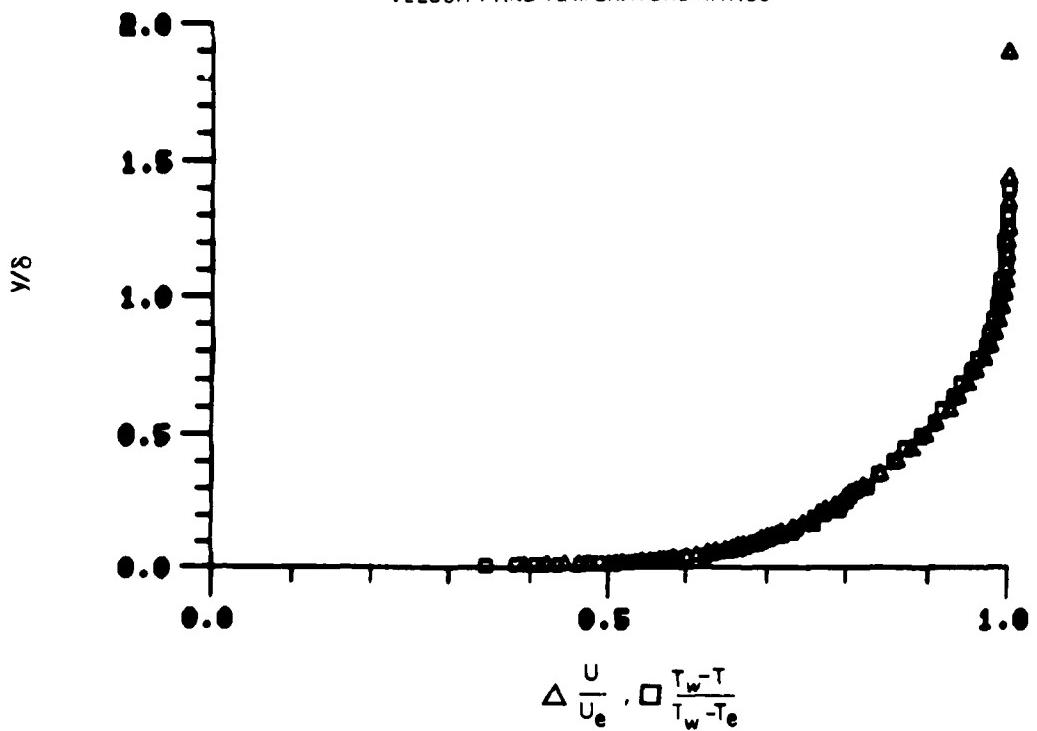


Figure 42. Boundary Layer Velocity Profiles
Run No.7 Point No.15

78-12-100-2

VELOCITY AND TEMPERATURE RATIOS



VELOCITY AND TEMPERATURE DISTRIBUTIONS IN UNIVERSAL COORDINATES

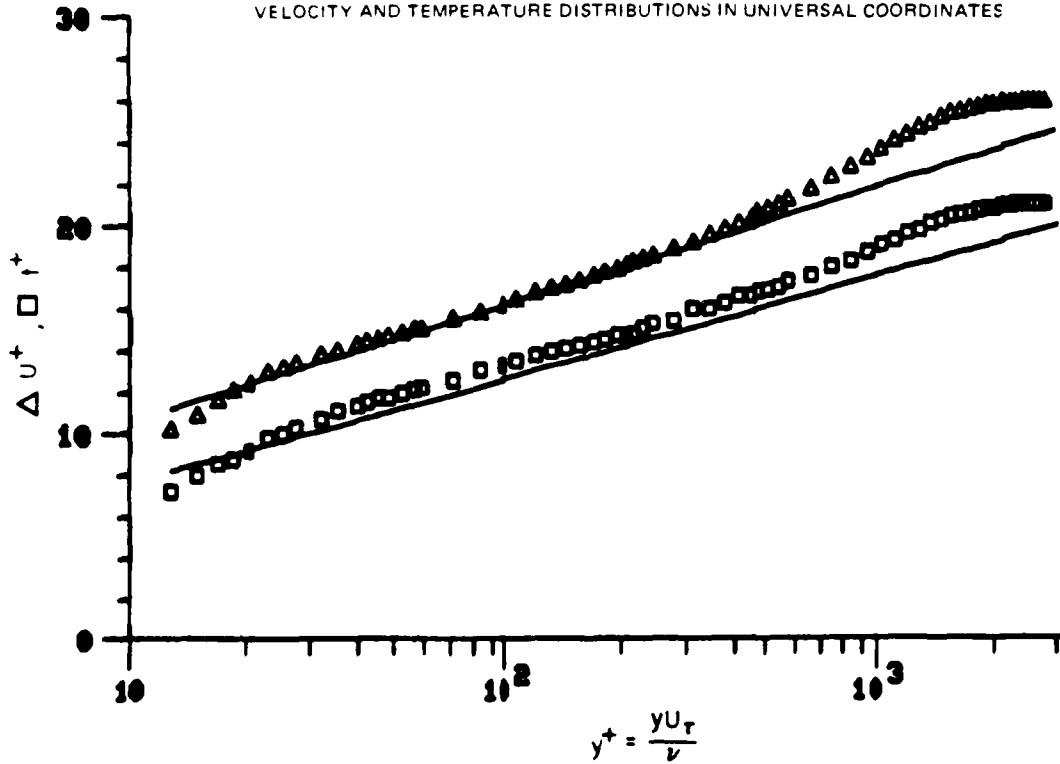


Figure 43. Boundary Layer Velocity and Temperature Profiles
Run No. 7 Point No. 17

78-12-100-1

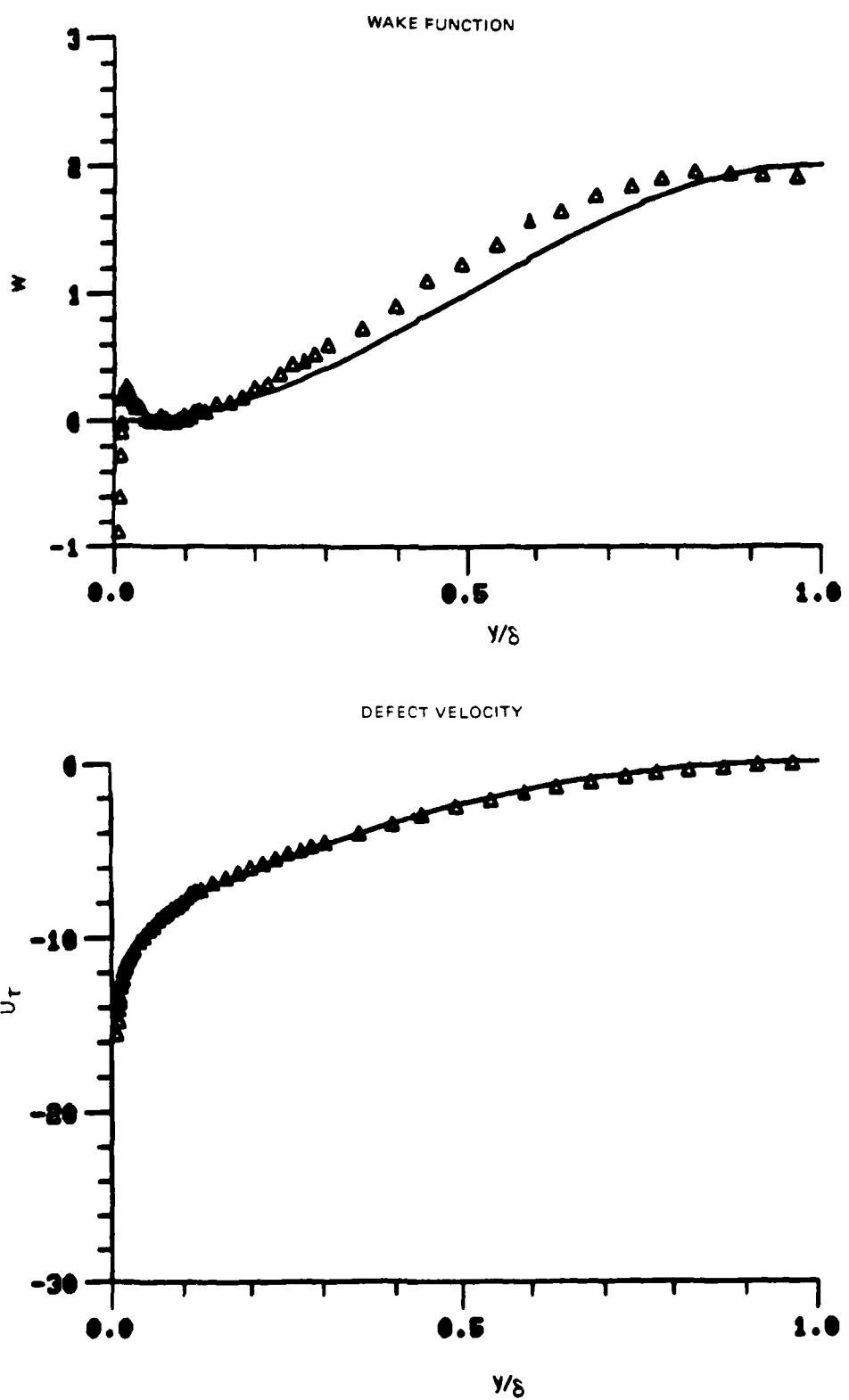


Figure 43. Boundary Layer Velocity Profiles
Run No. 7 Point No. 17

78-12-100-2

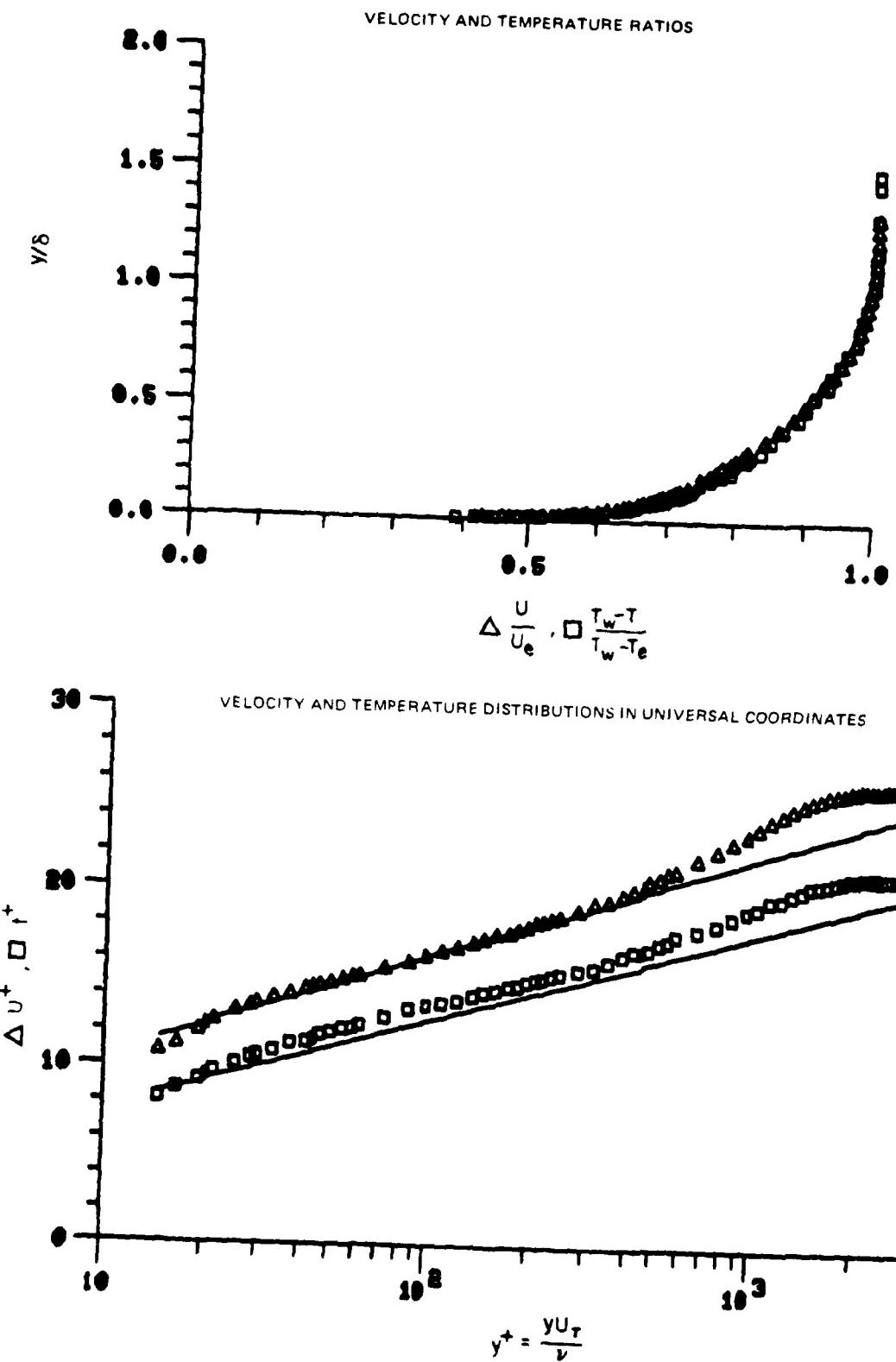


Figure 44. Boundary Layer Velocity and Temperature Profiles
Run No. 7 Point No. 18

78-12-100-1

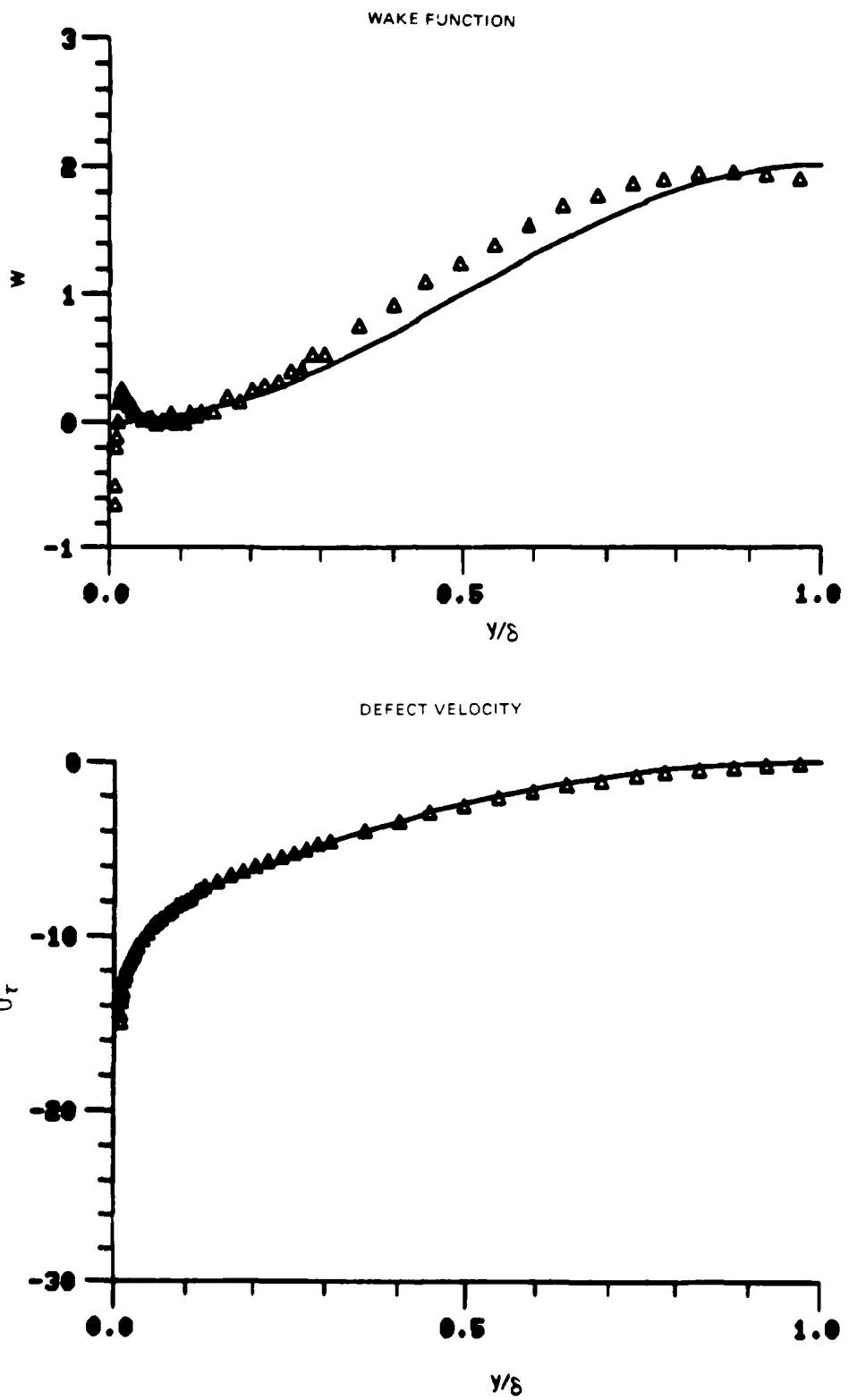


Figure 44. Boundary Layer Velocity Profiles
Run No. 7 Point No. 18

78-12-100-2

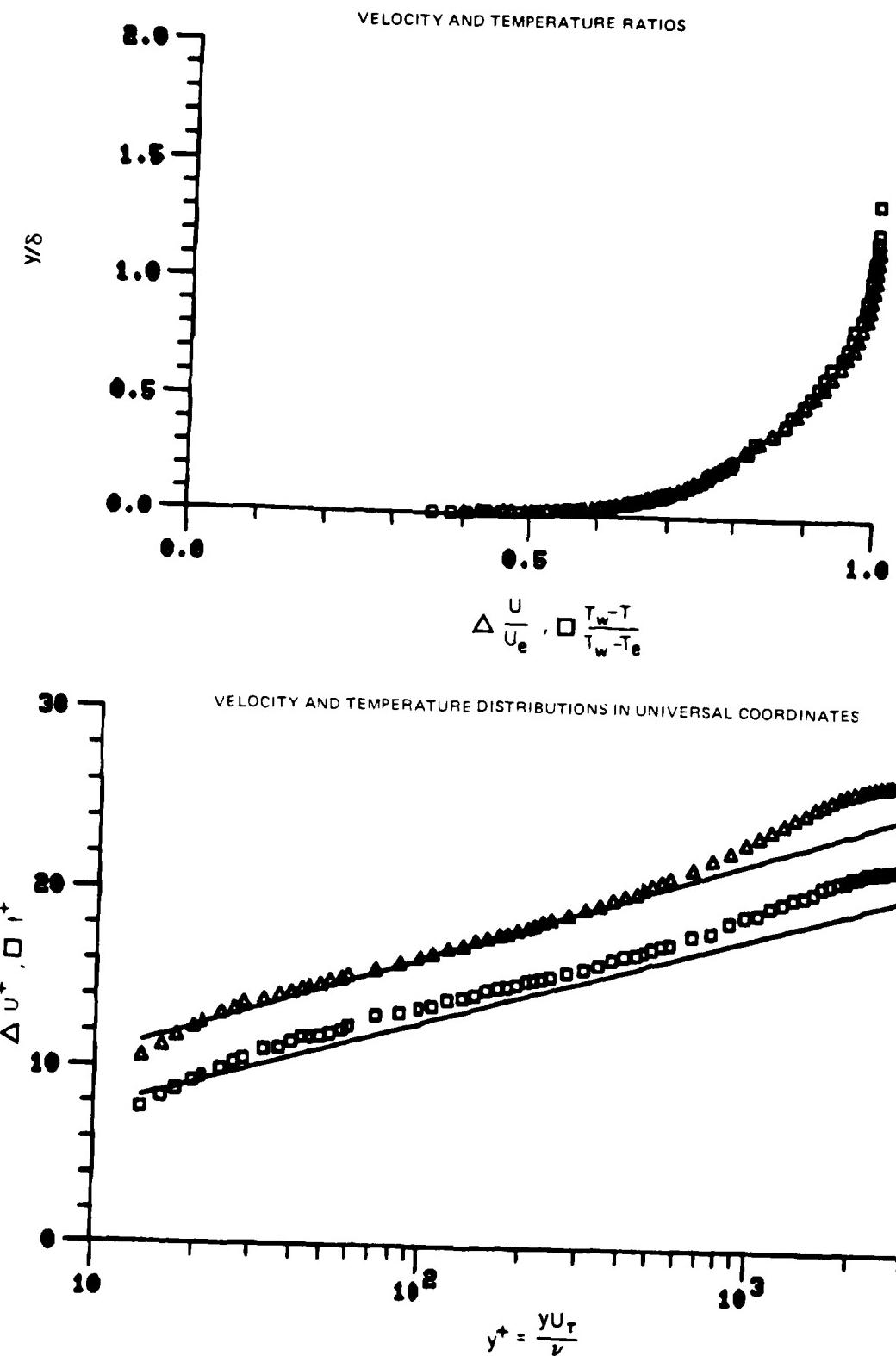


Figure 45. Boundary Layer Velocity and Temperature Profiles
Run No. 7 Point No. 20

78-12-100-1

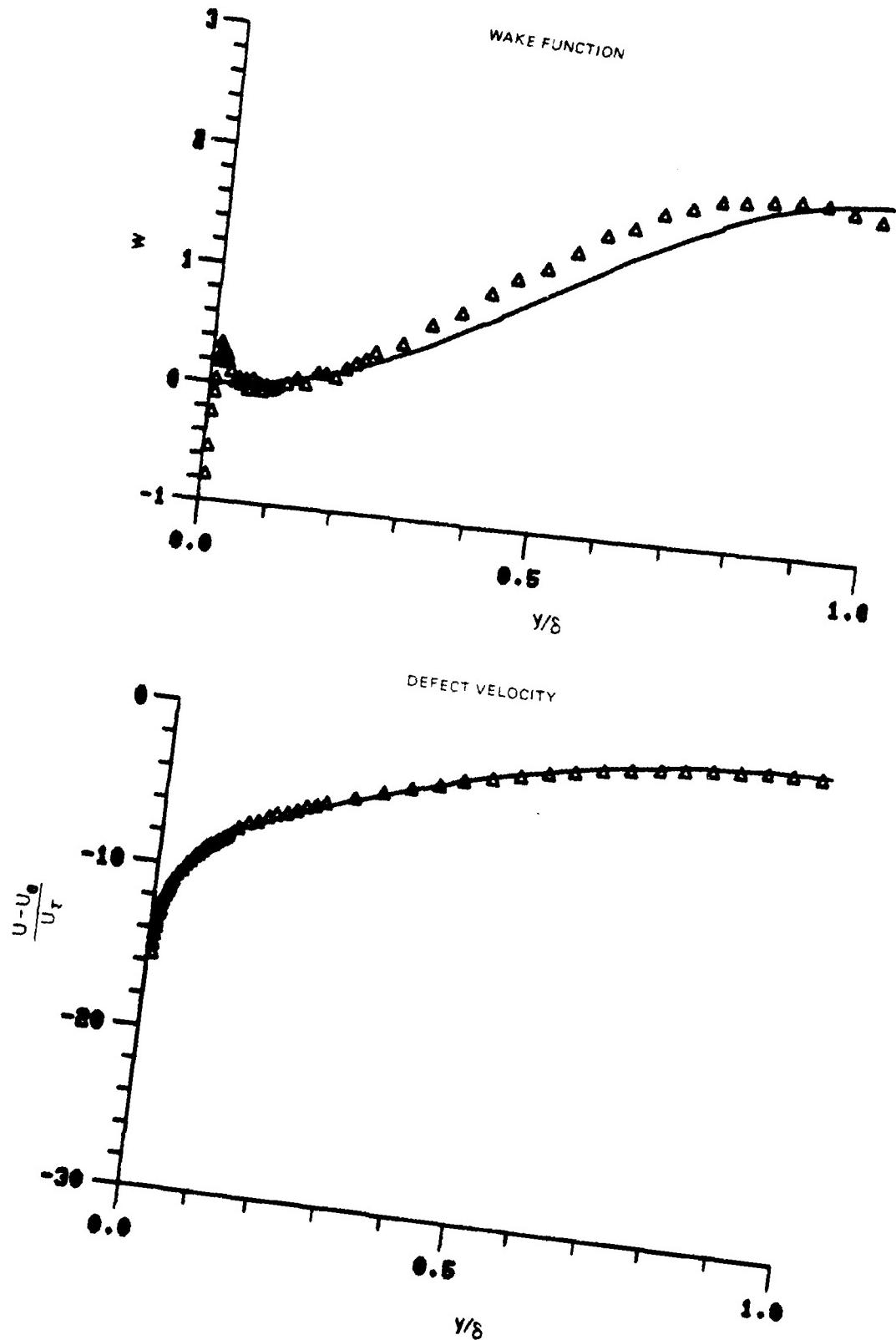


Figure 45. Boundary Layer Velocity Profiles
Run No. 7 Point No. 20

78-12-100-2

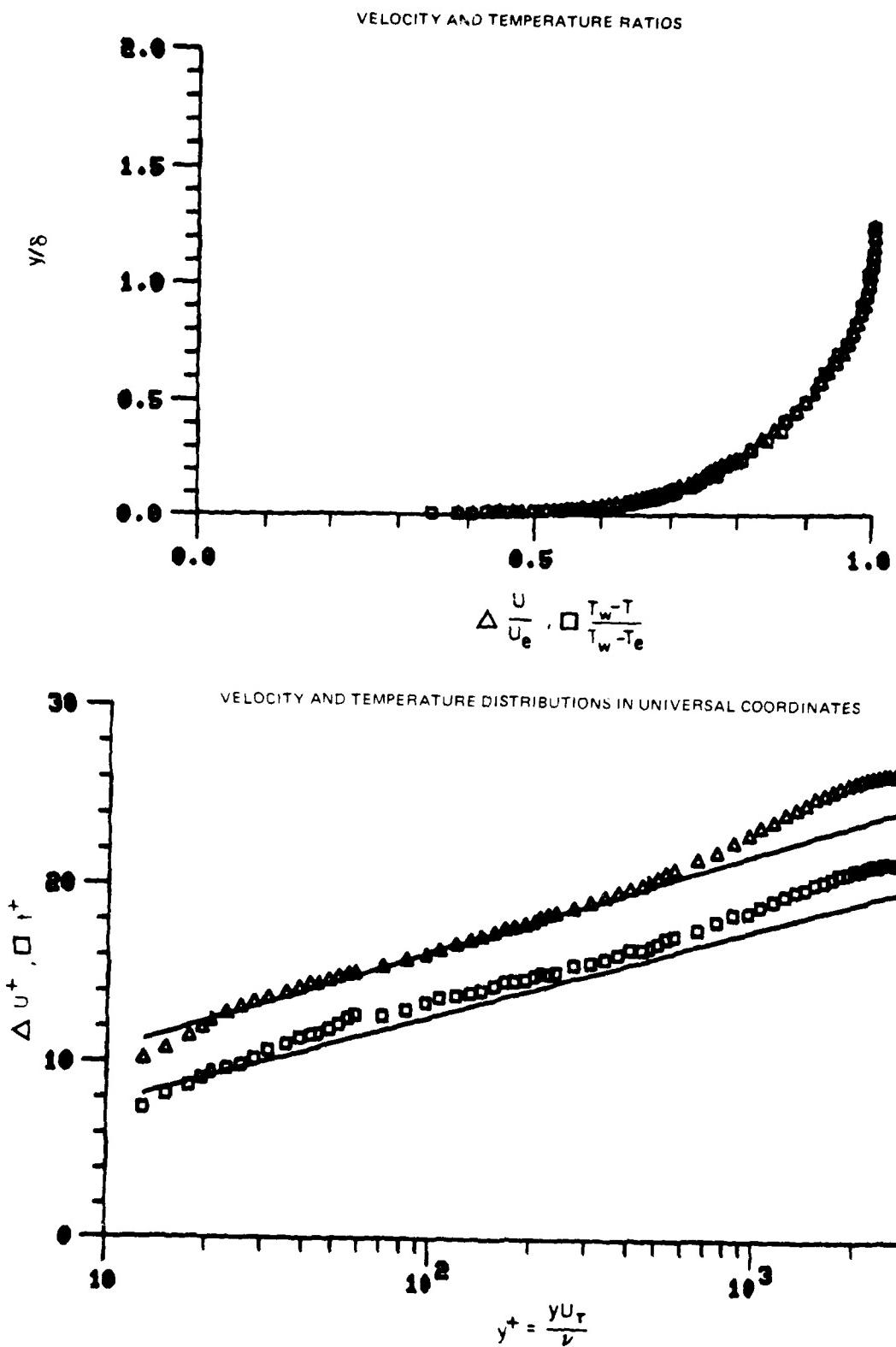


Figure 46. Boundary Layer Velocity and Temperature Profiles
Run No. 7 Point No. 22

7B-12-100-1

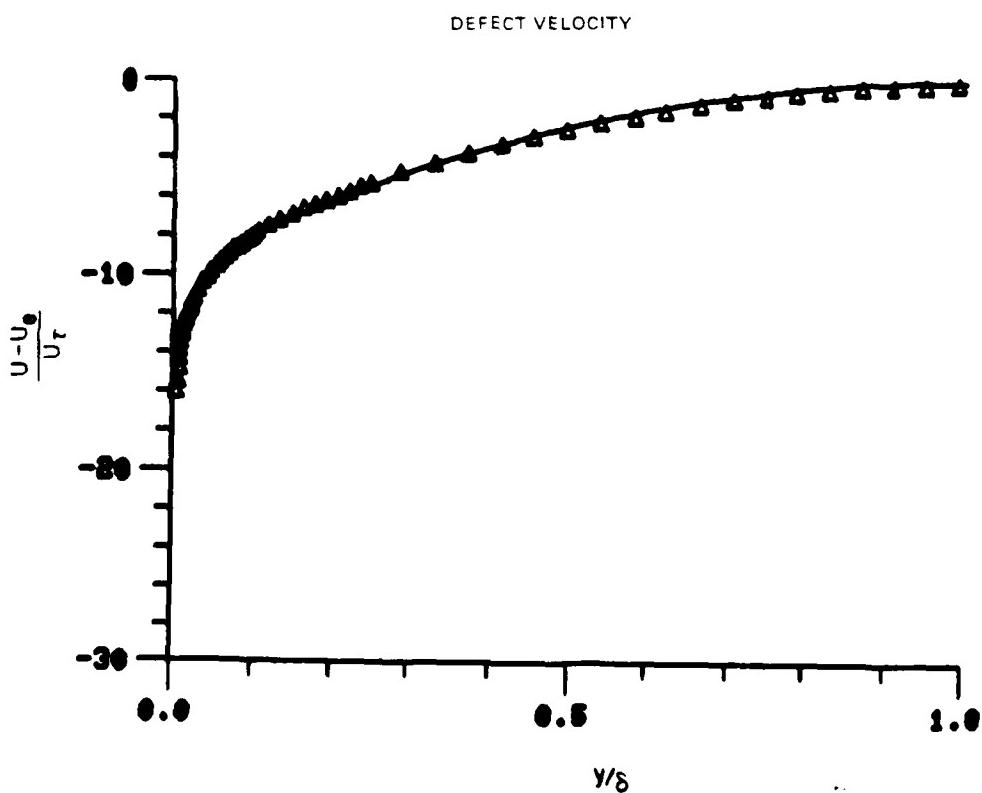
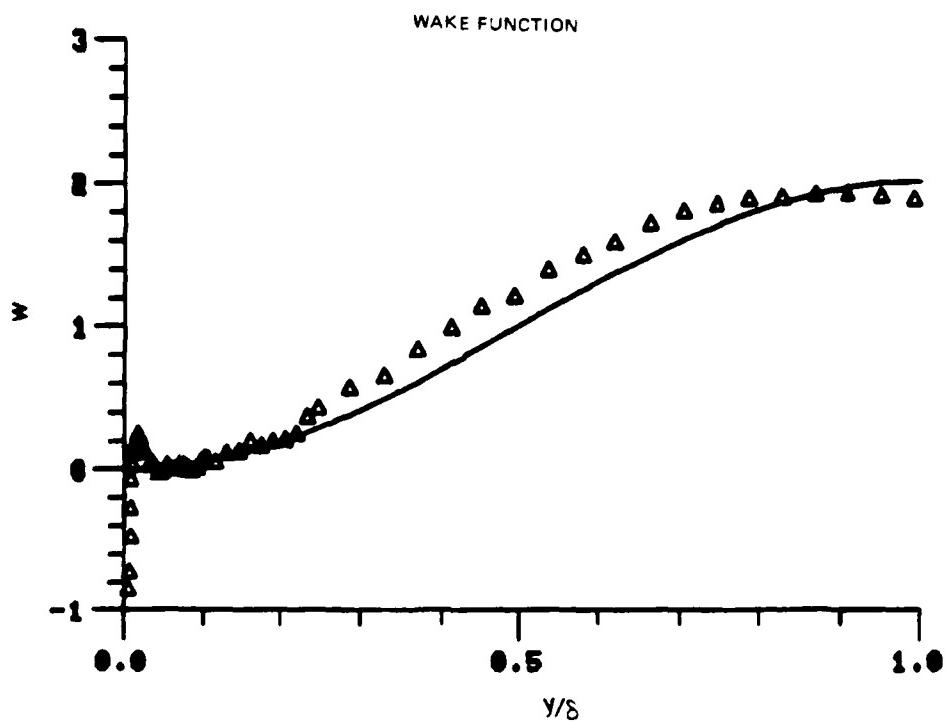
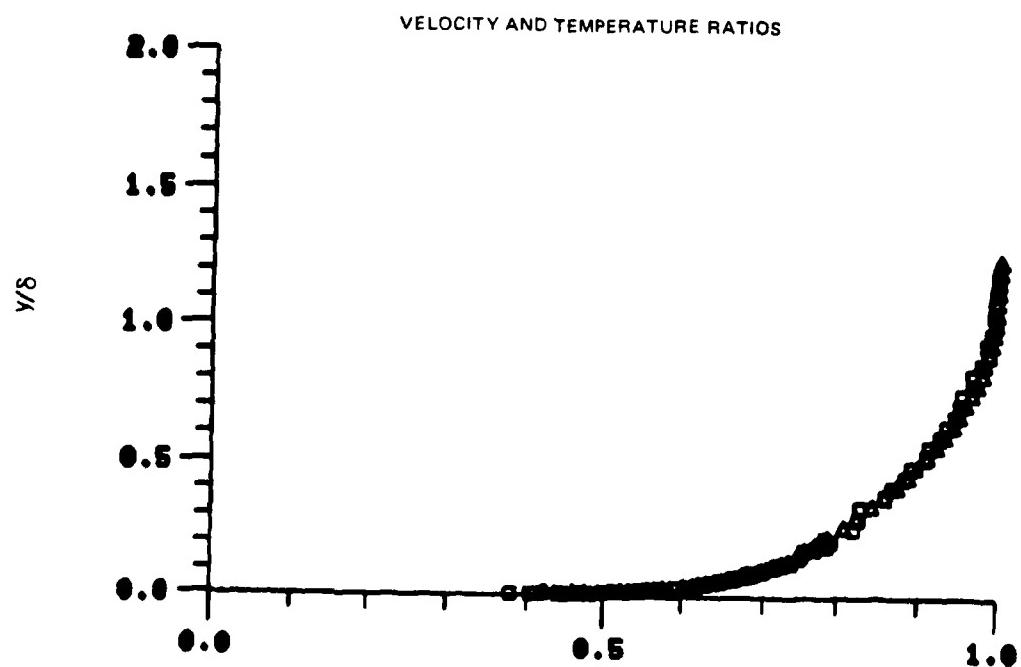


Figure 46. Boundary Layer Velocity Profiles
Run No. 7 Point No. 22

78-12-100-2



$$\Delta \frac{U}{U_e}, \square \frac{T_w - T}{T_w - T_e}$$

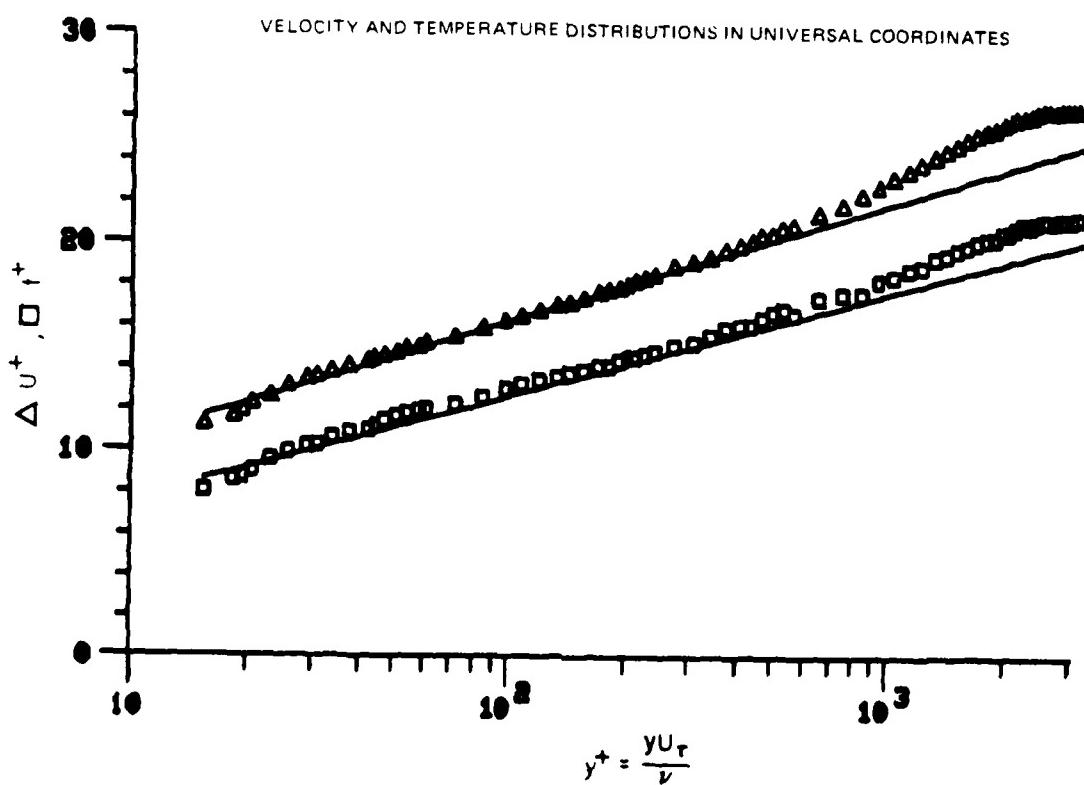


Figure 47. Boundary Layer Velocity and Temperature Profiles
Run No. 7 Point No. 23

78-12-100-1

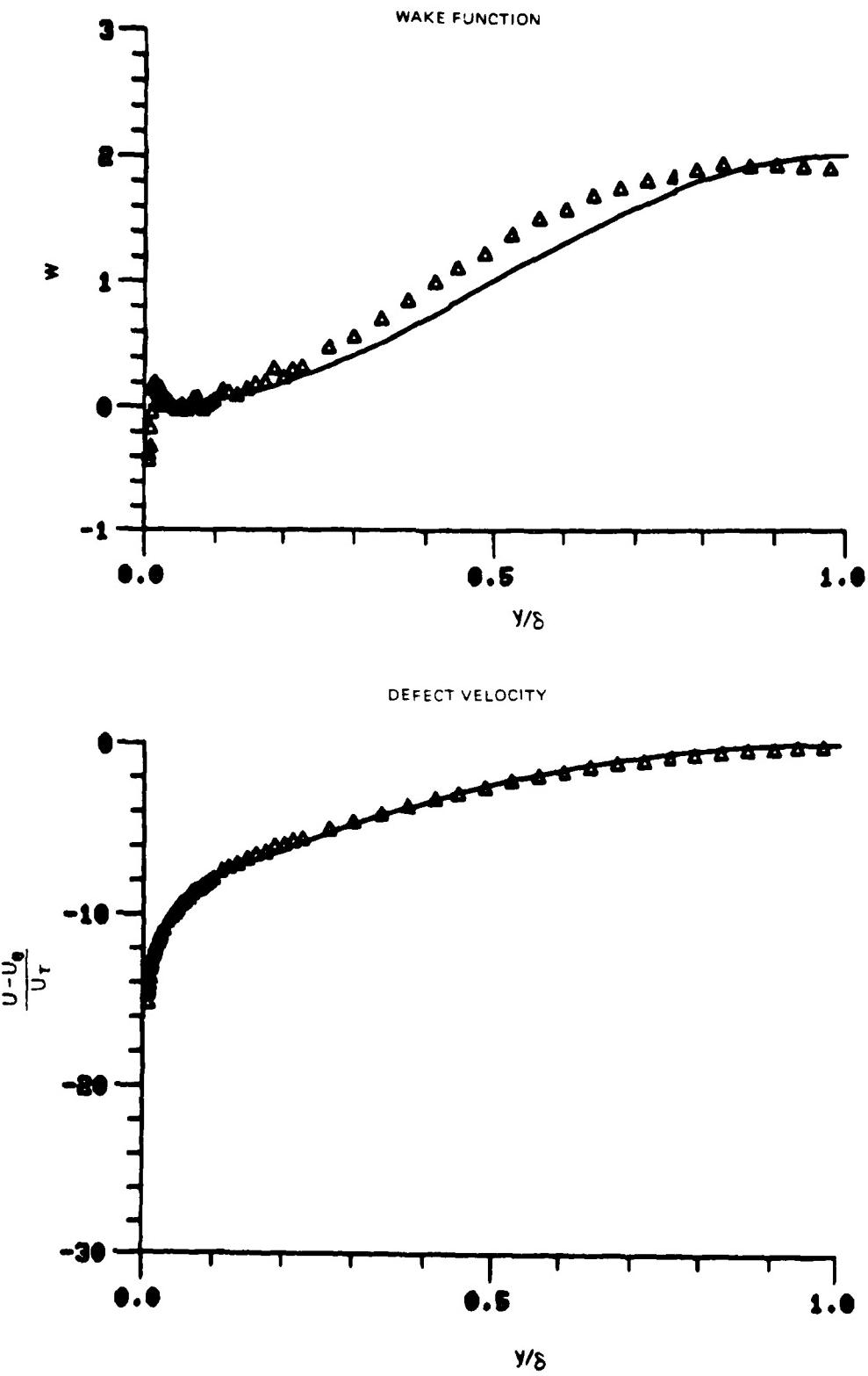


Figure 47. Boundary Layer Velocity Profiles
Run No. 7 Point No. 23

78-12-100-2

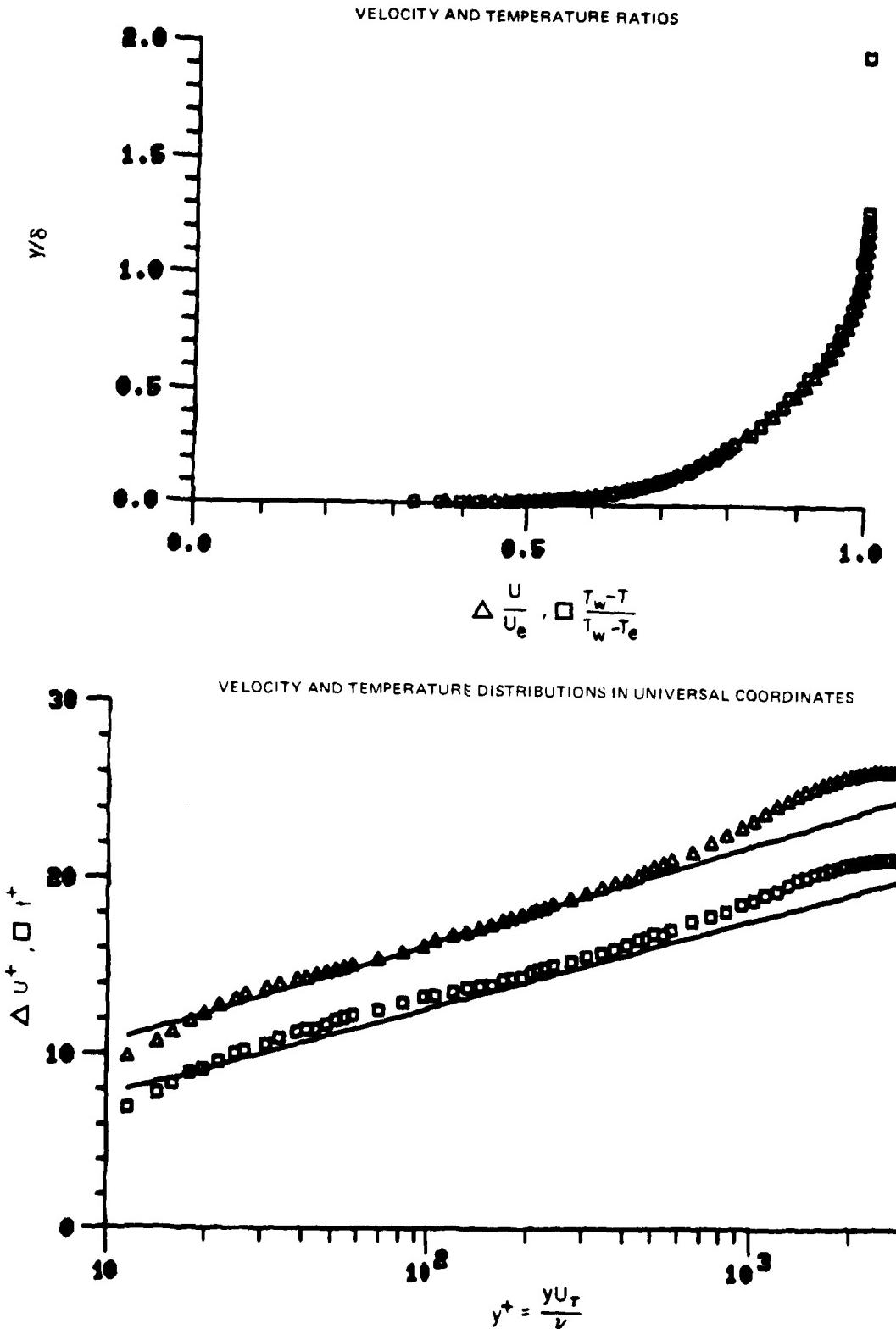


Figure 48. Boundary Layer Velocity and Temperature Profiles
Run No. 7 Point No. 24

78-12-100-1

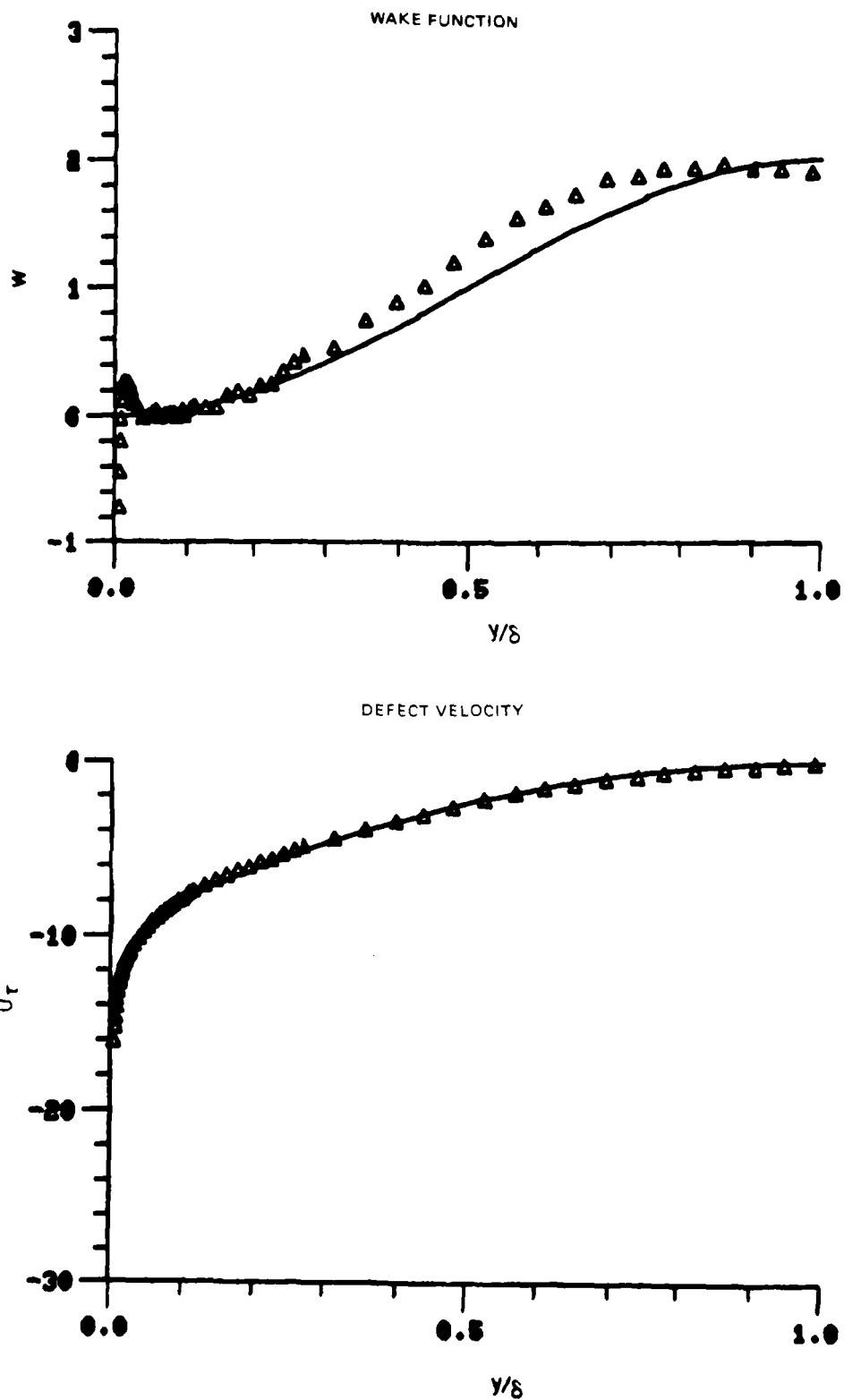


Figure 48. Boundary Layer Velocity Profiles
Run No. 7 Point No. 24

78-12-100-2

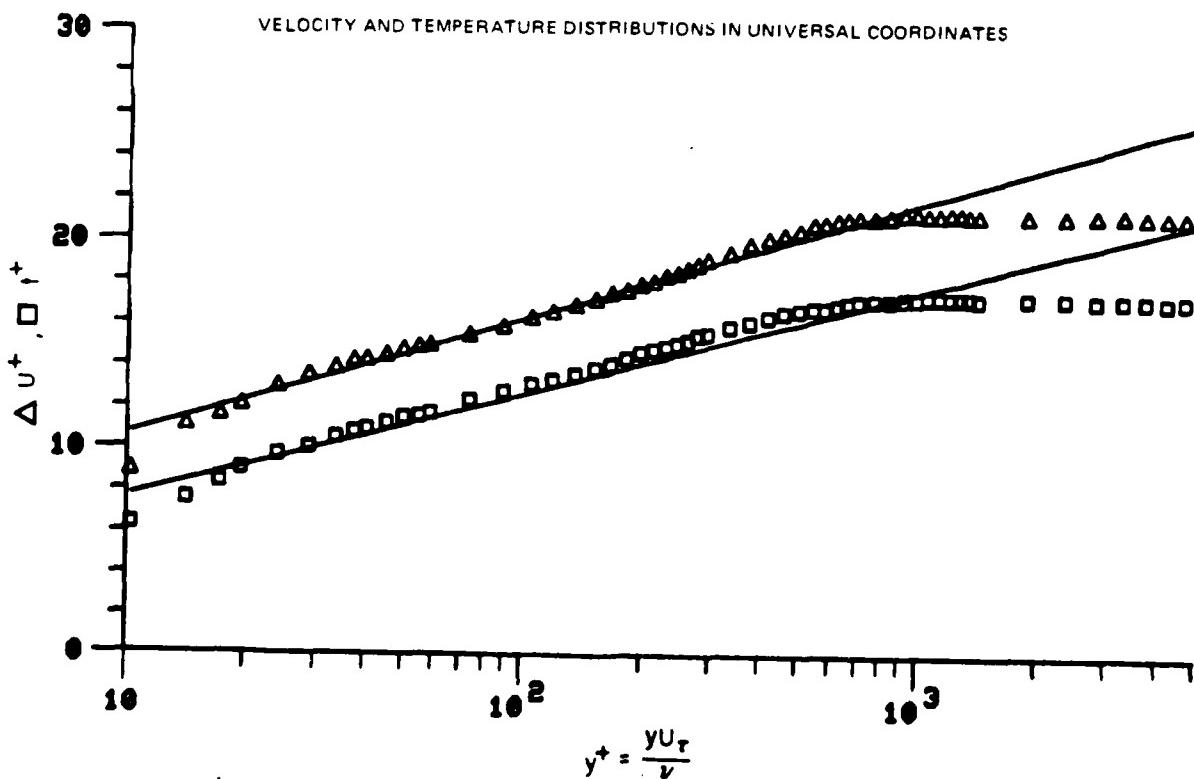
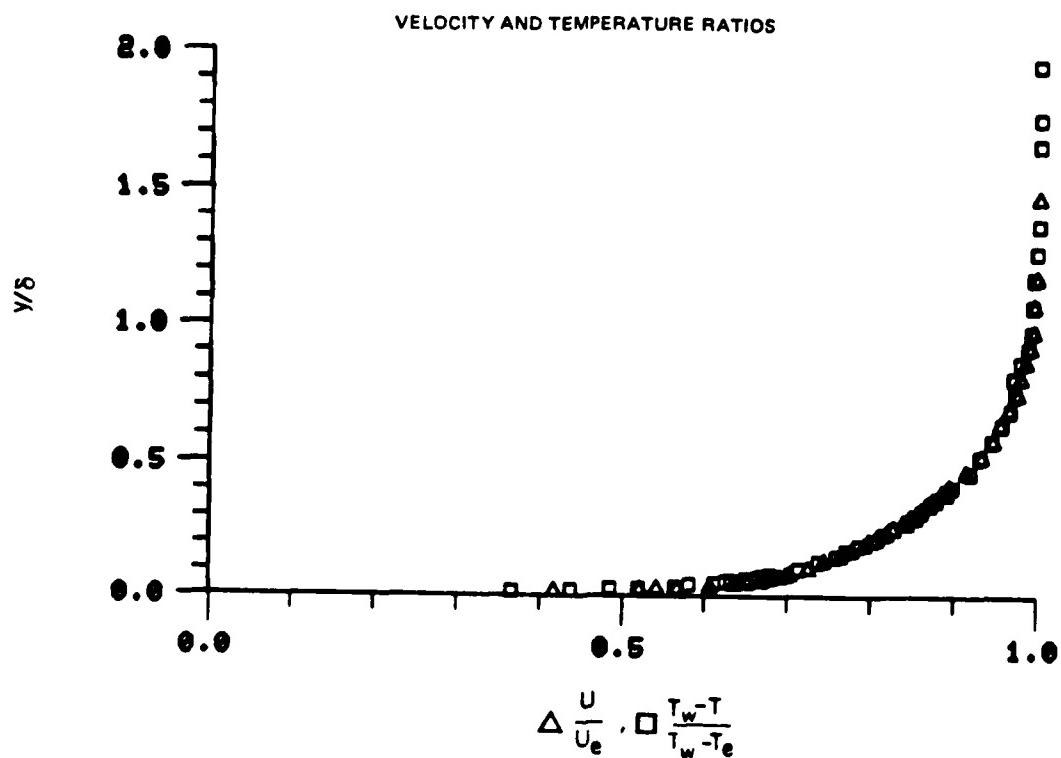


Figure 49. Boundary Layer Velocity and Temperature Profiles

Run No. 10 Point No. 1

78-12-100-1

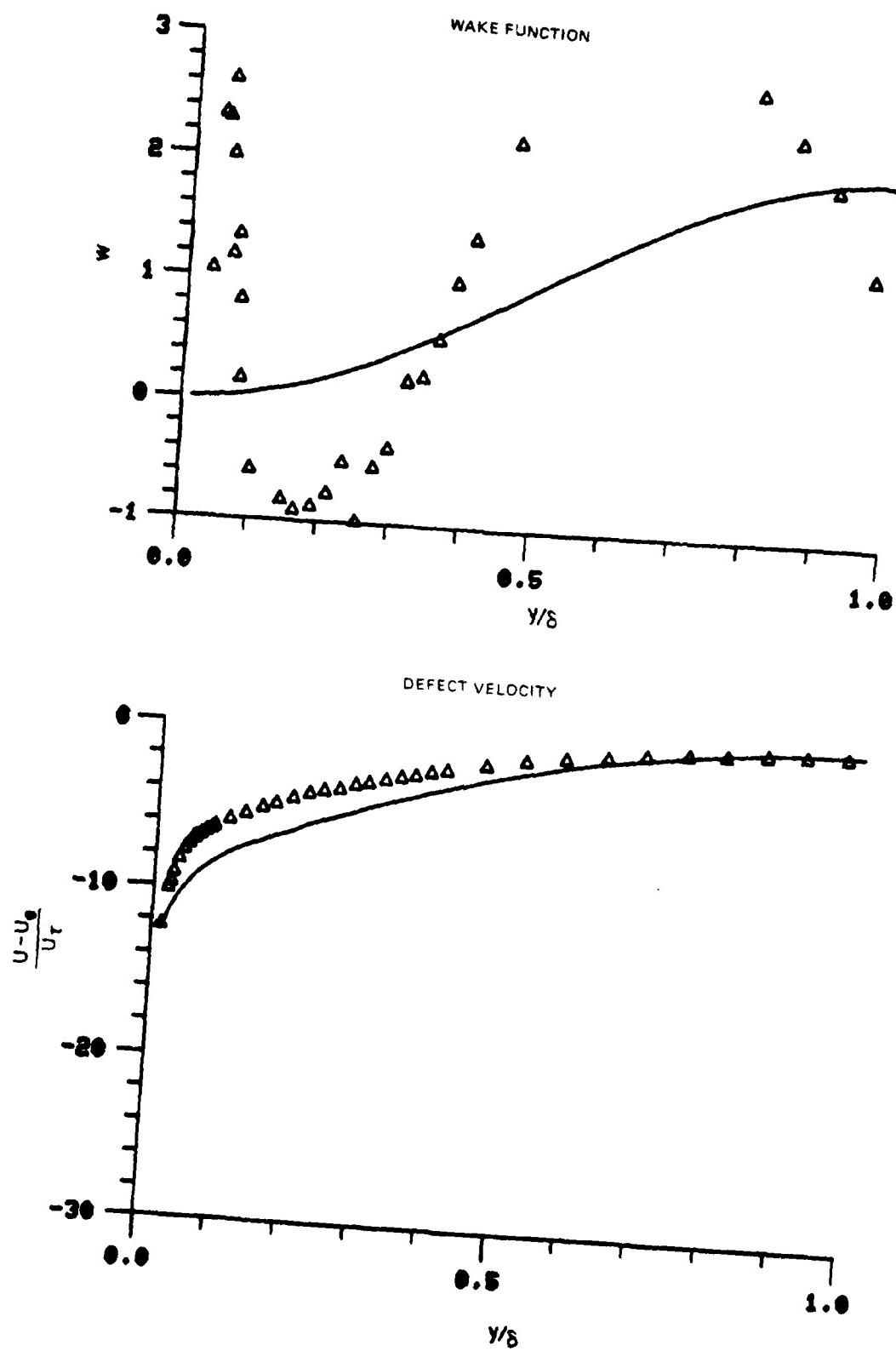


Figure 49. Boundary Layer Velocity Profiles
Run No. 10 Point No. 1

78-12-100-2

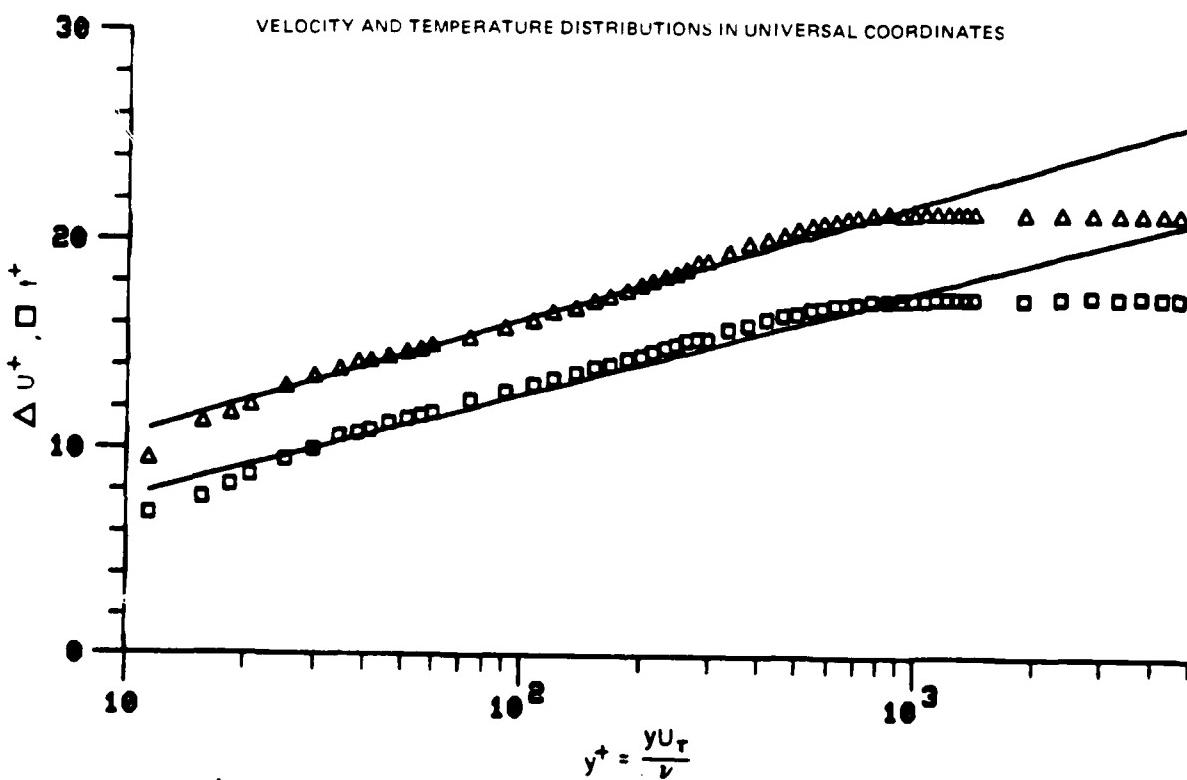
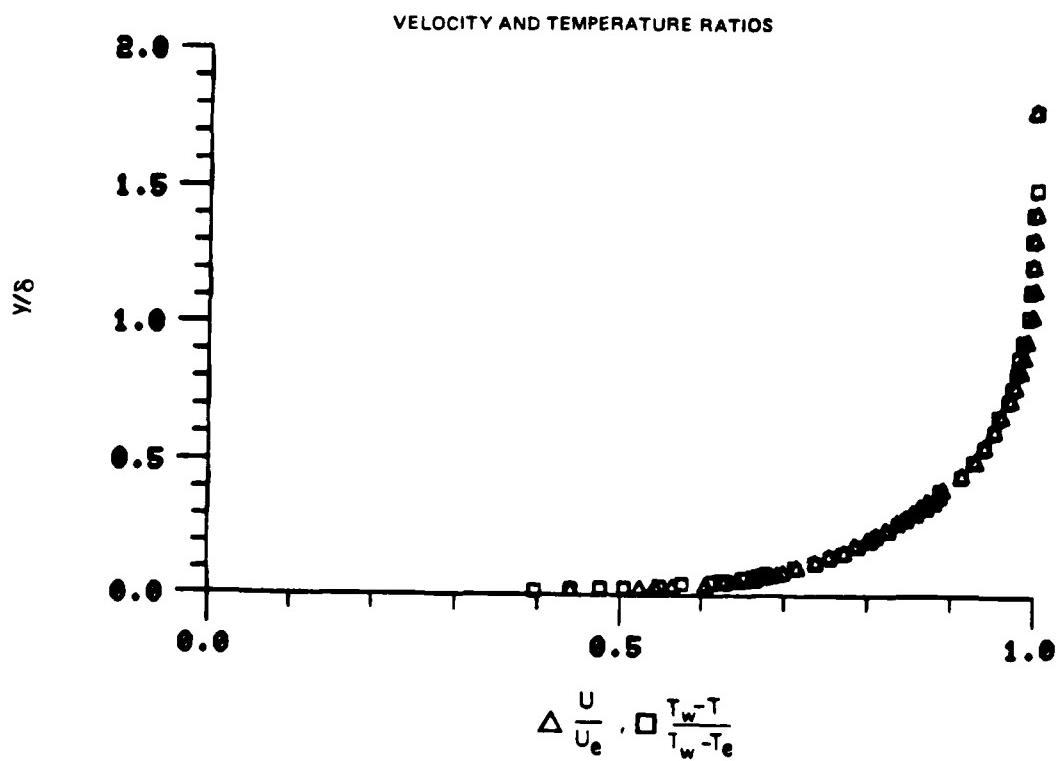


Figure 50. Boundary Layer Velocity and Temperature Profiles
Run No. 10 Point No. 2

78-12-100-1

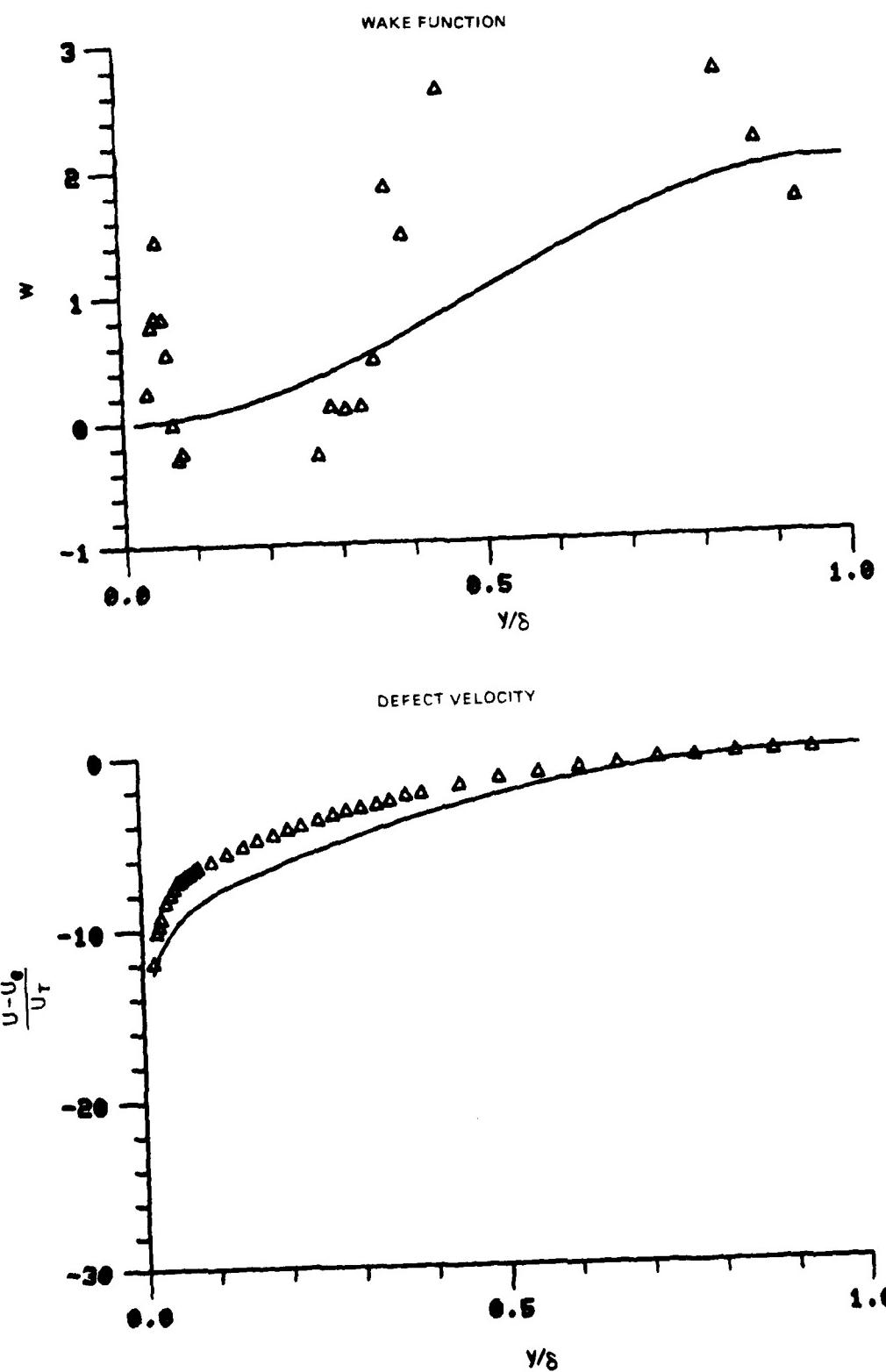


Figure 50. Boundary Layer Velocity Profiles
Run No. 10 Point No. 2

78-12-100-2

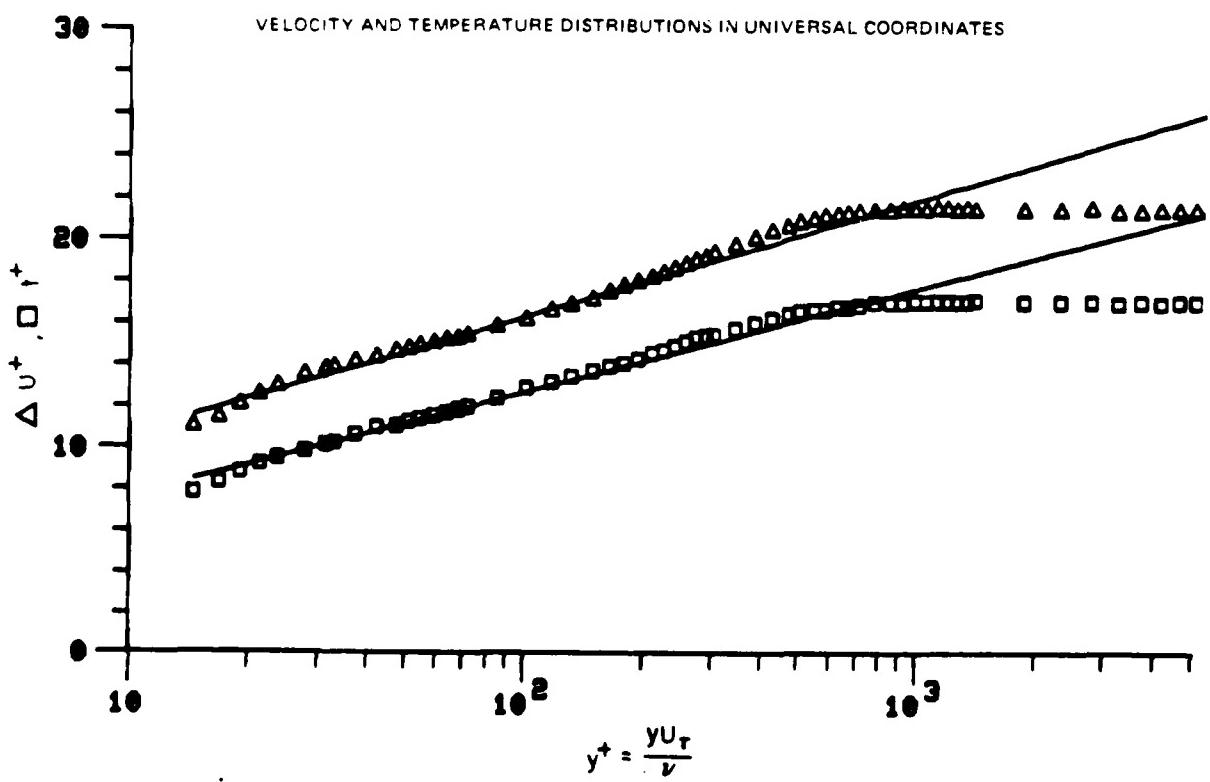
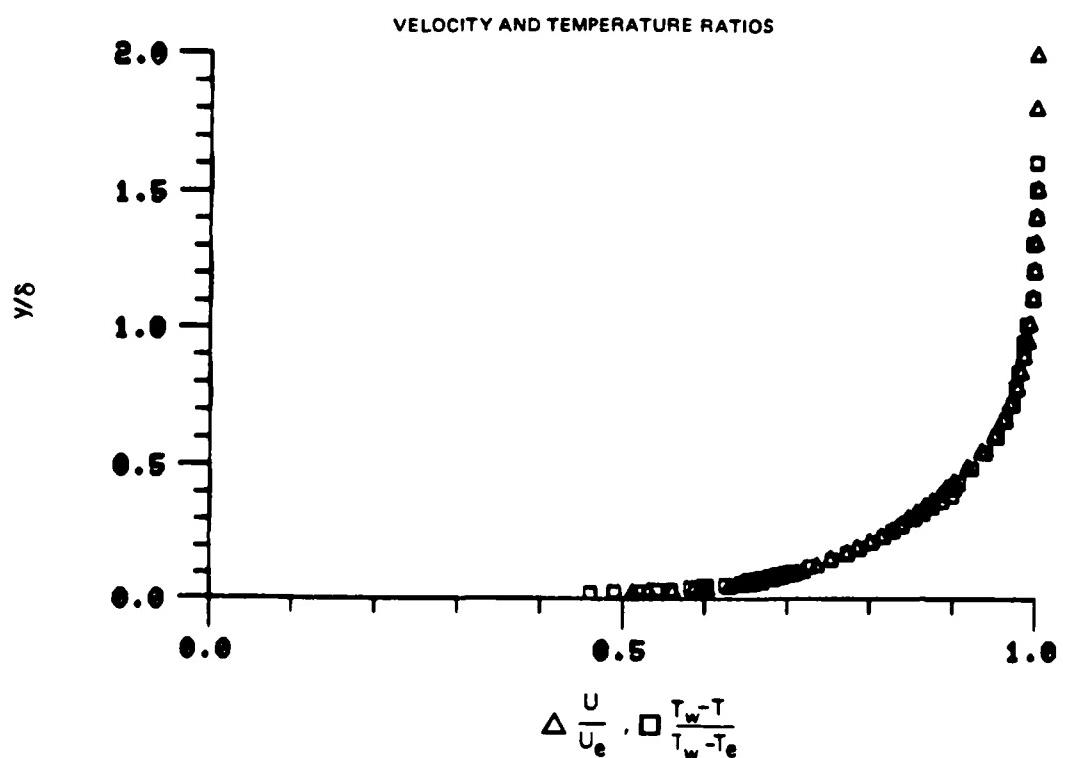


Figure 51. Boundary Layer Velocity and Temperature Profiles
Run No. 10 Point No. 3

78-12-100-1

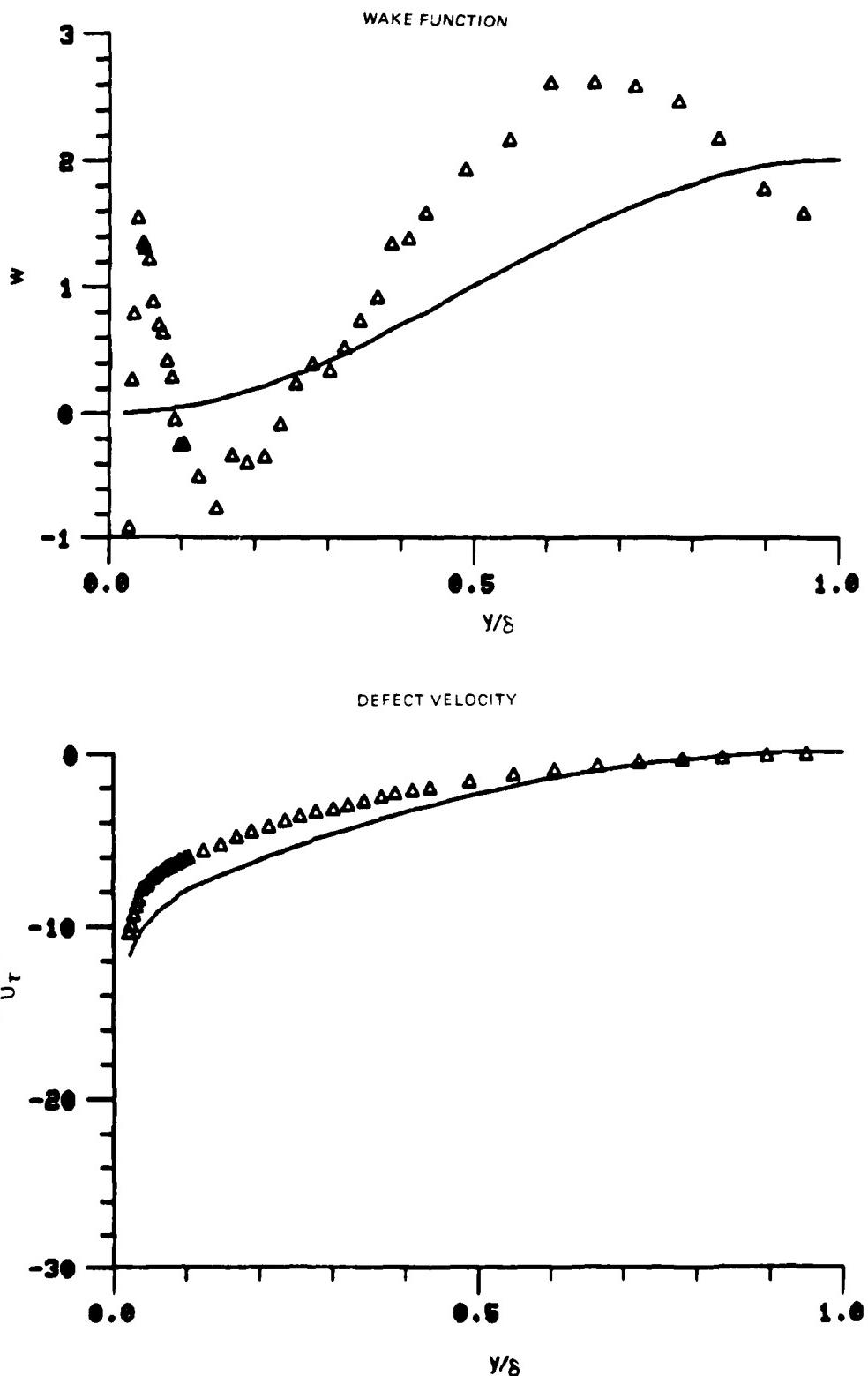


Figure 51. Boundary Layer Velocity Profiles
Run No. 10 Point No. 3

78-12-100-2

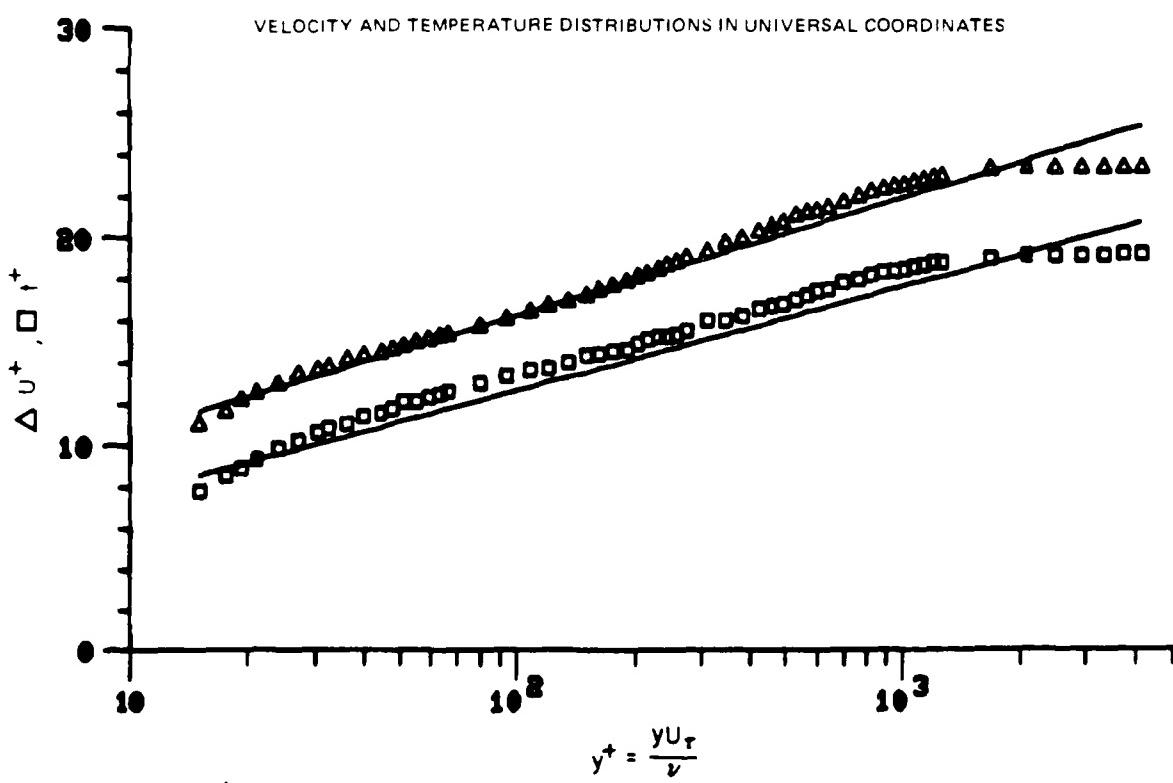
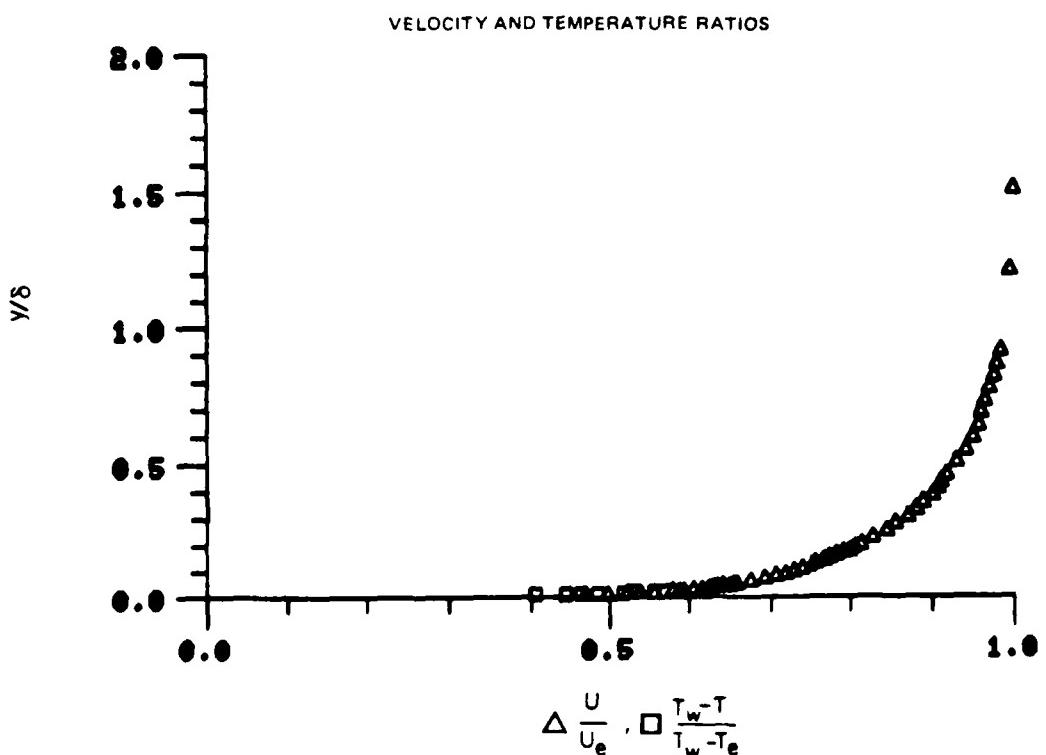


Figure 52. Boundary Layer Velocity and Temperature Profiles
Run No. 6 Point No. 7

78-12-100-1

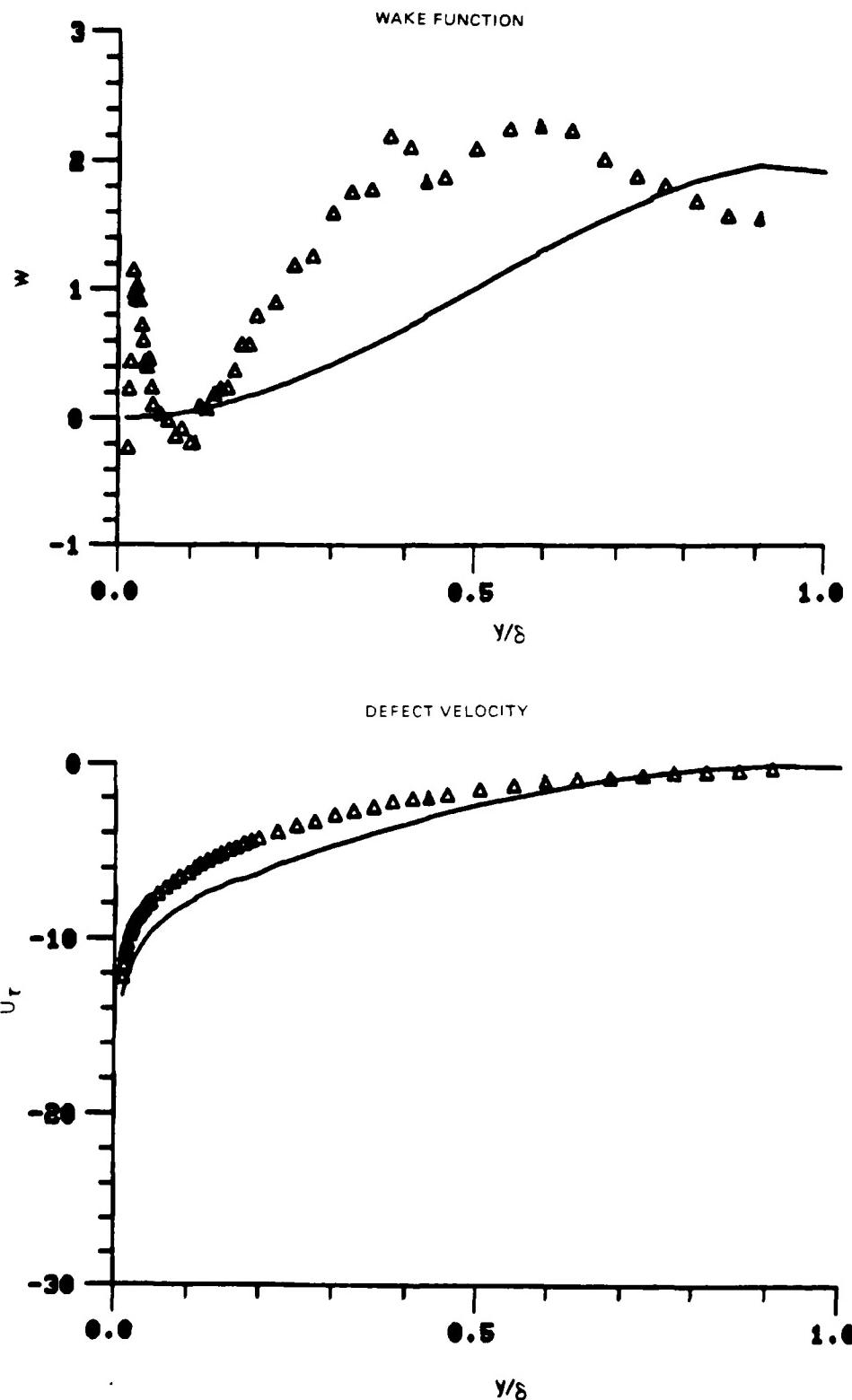
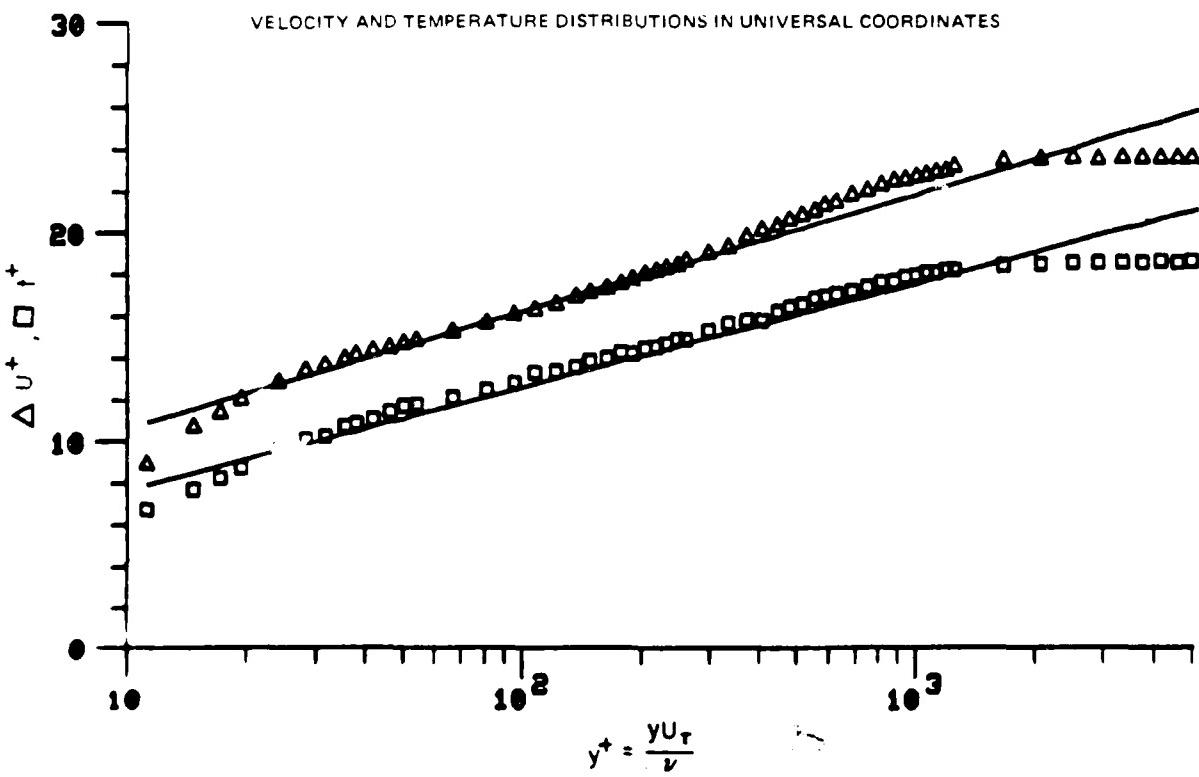
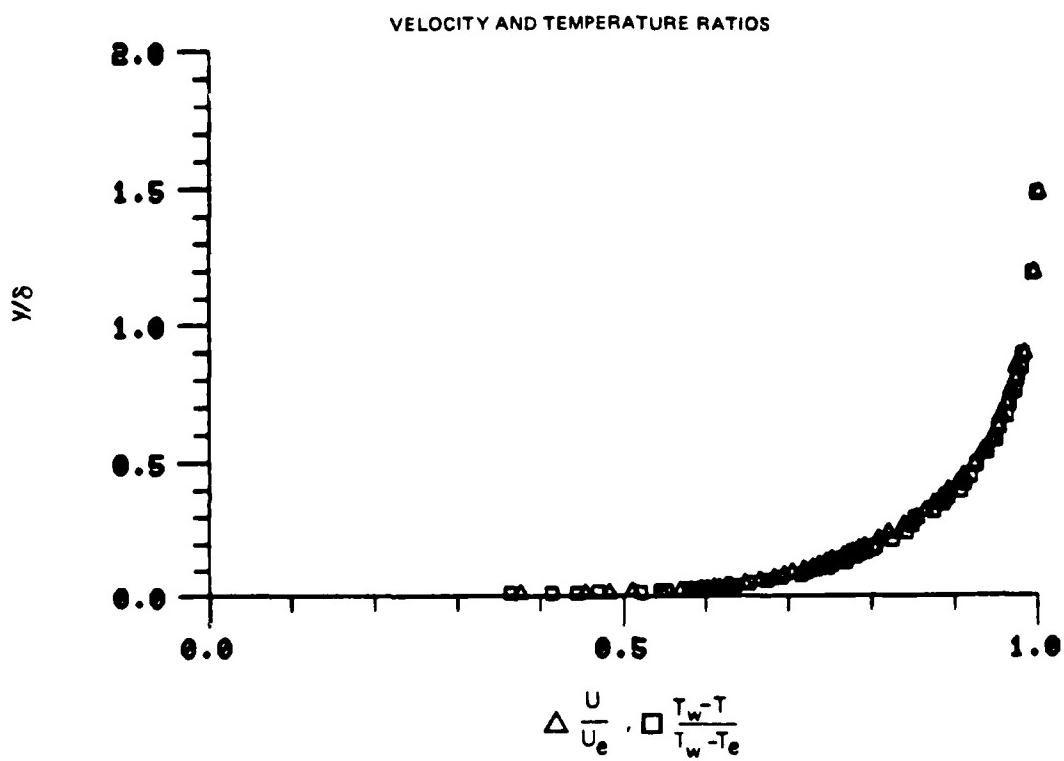


Figure 52. Boundary Layer Velocity Profiles
Run No. 6 Point No. 7

78-12-100-2



Boundary Layer Velocity and Temperature Profiles
Run No. 10 Point No. 4

78-12-100-1

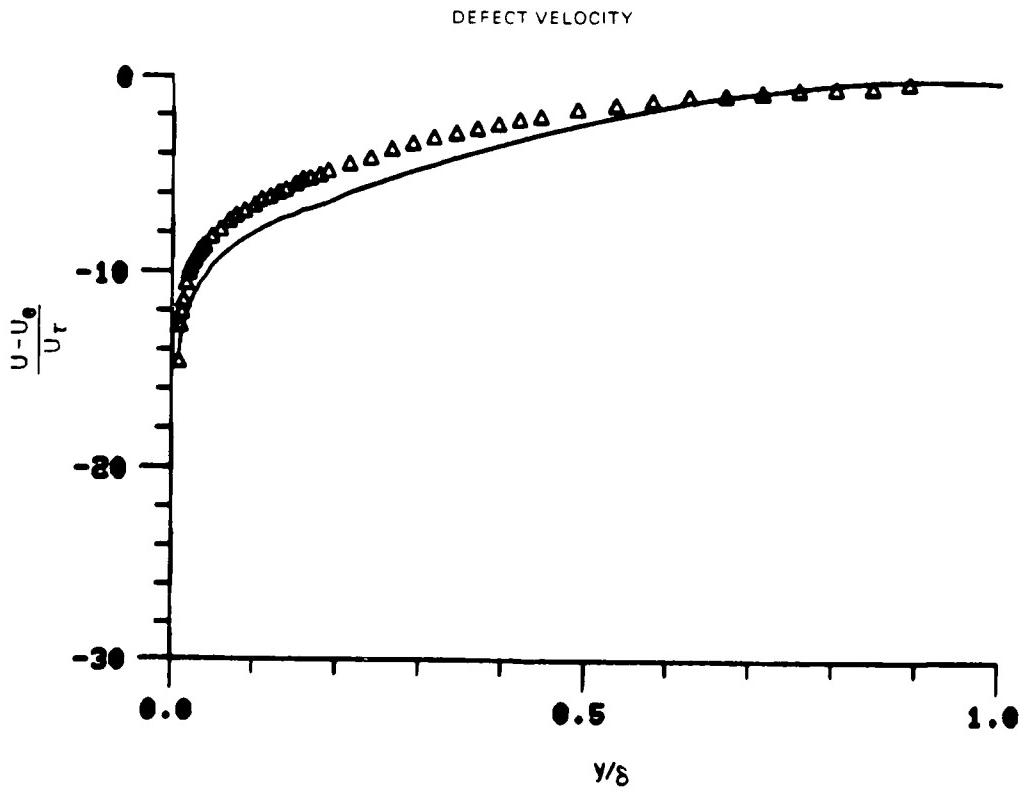
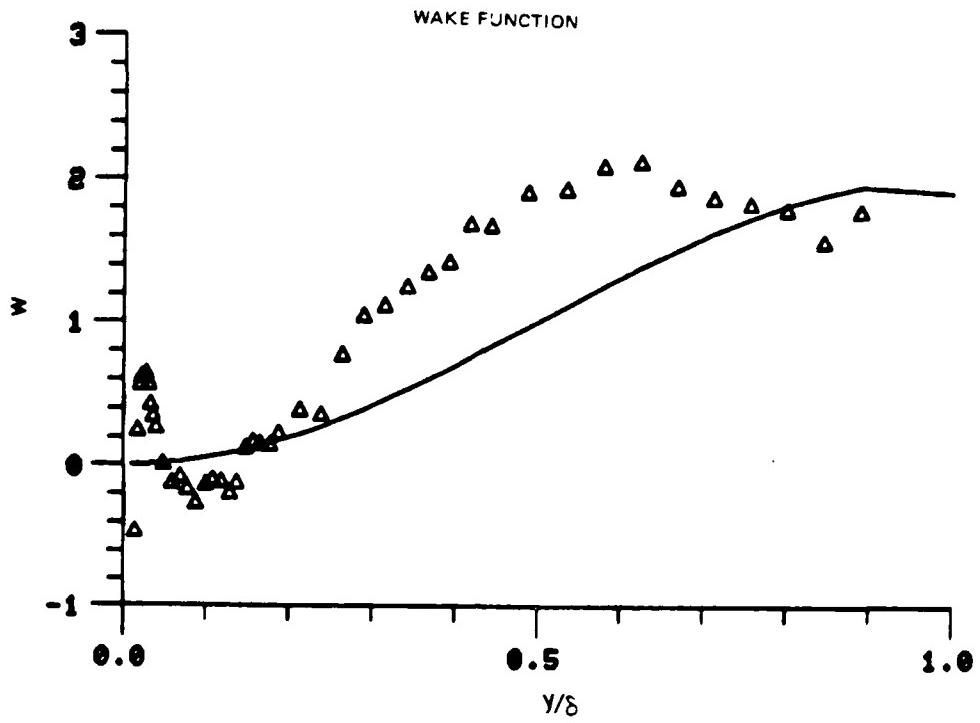


Figure 53. Boundary Layer Velocity Profiles
Run No.10 Point No. 4

78-12-100-2

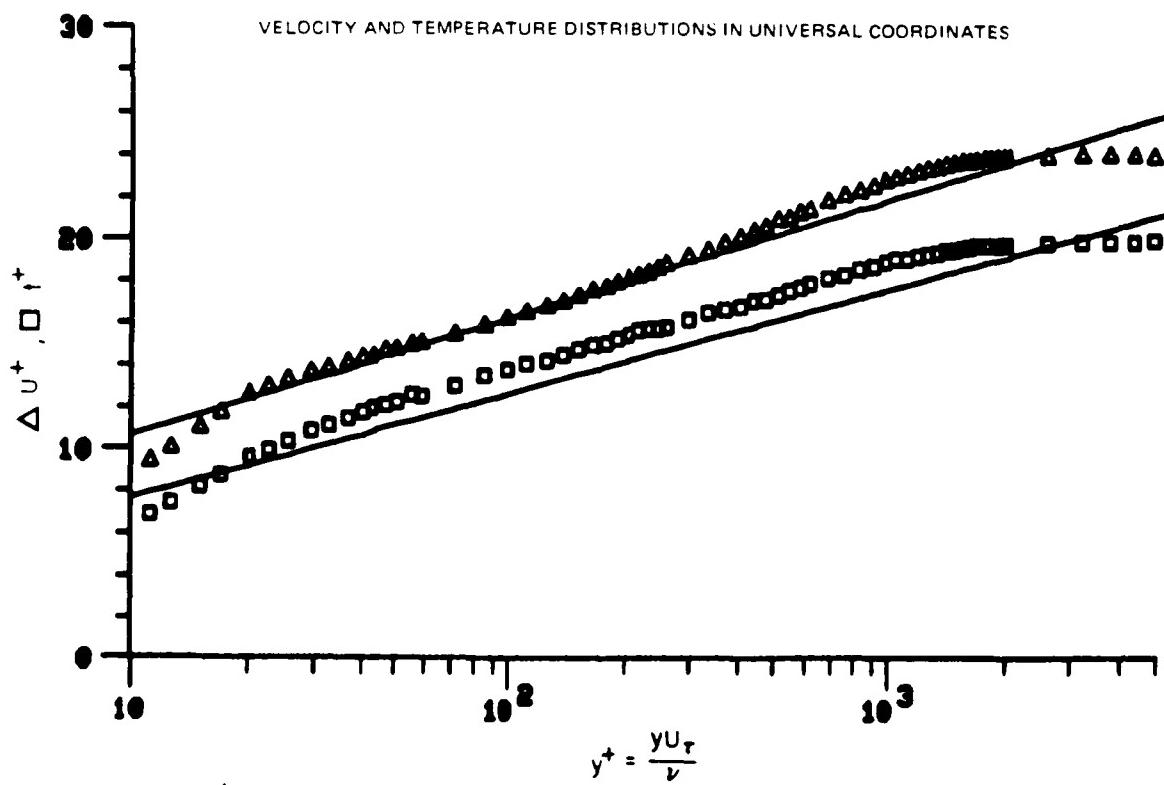
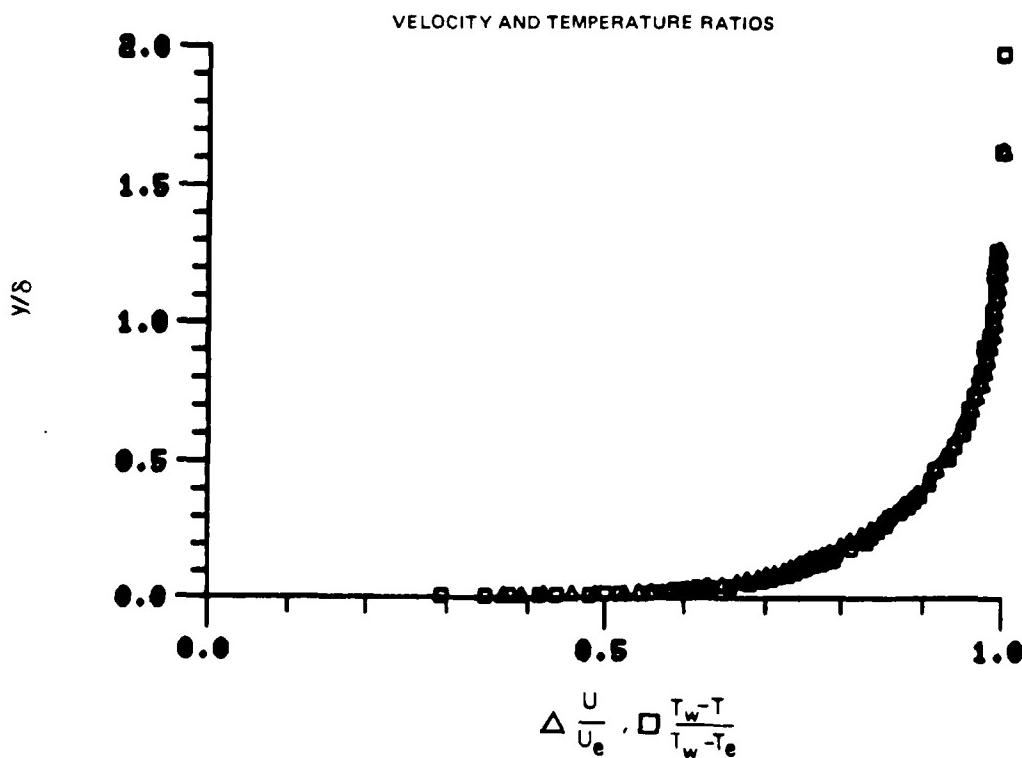


Figure 54. Boundary Layer Velocity and Temperature Profiles
Run No. 6 Point No. 11

78-12-100-1

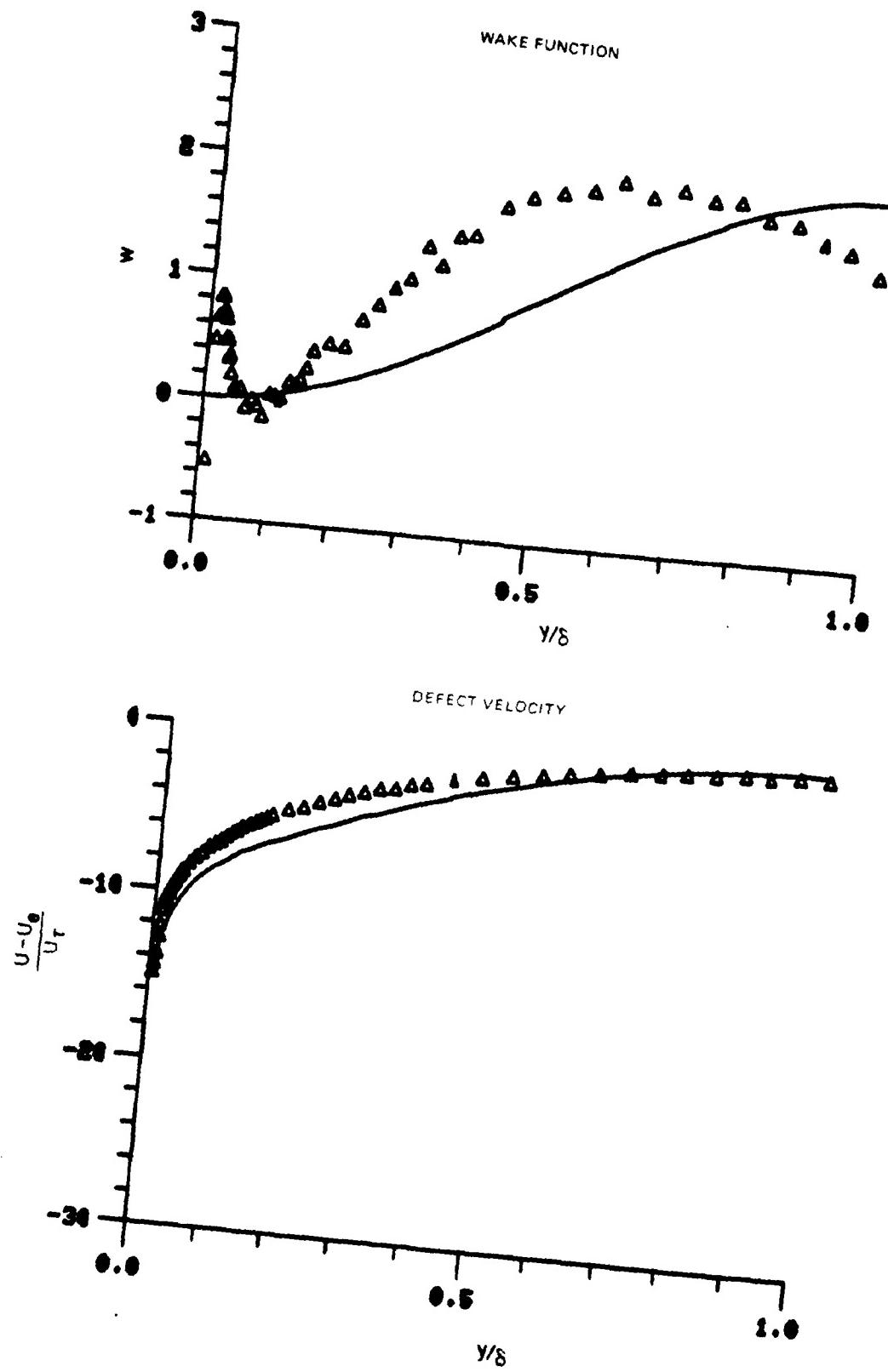


Figure 54. Boundary Layer Velocity Profiles
Run No. 6 Point No. 11

78-12-100-2

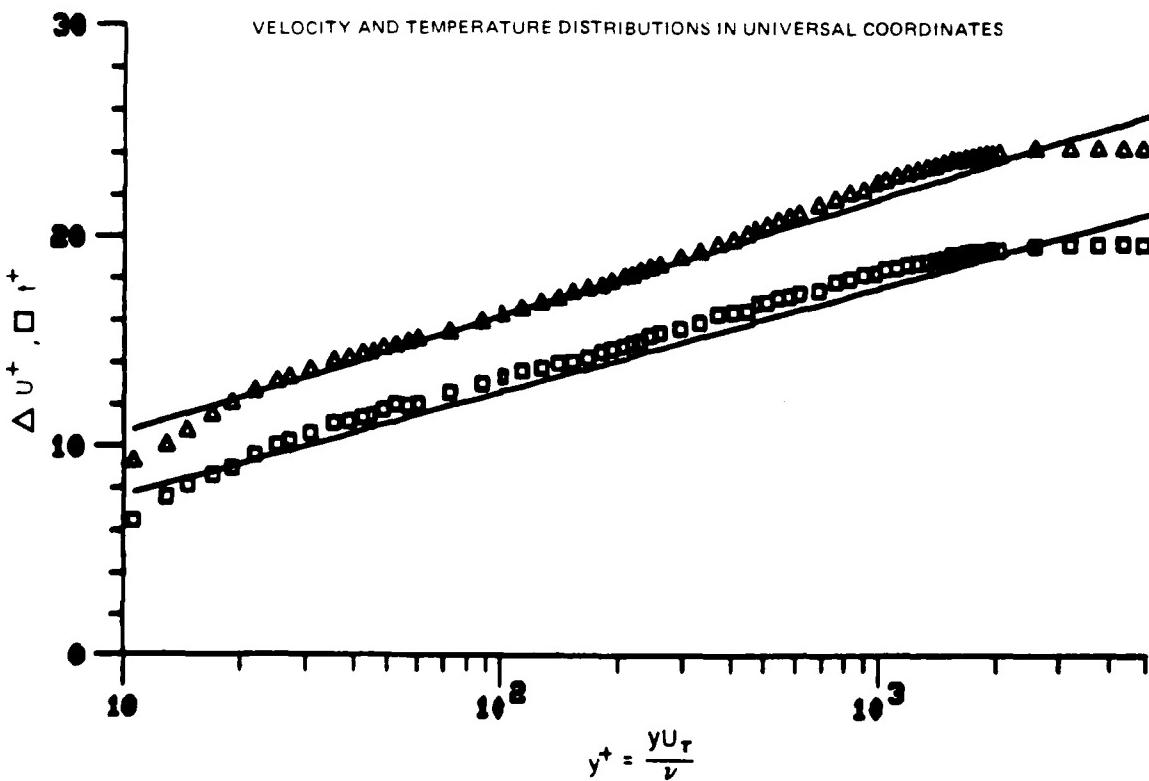
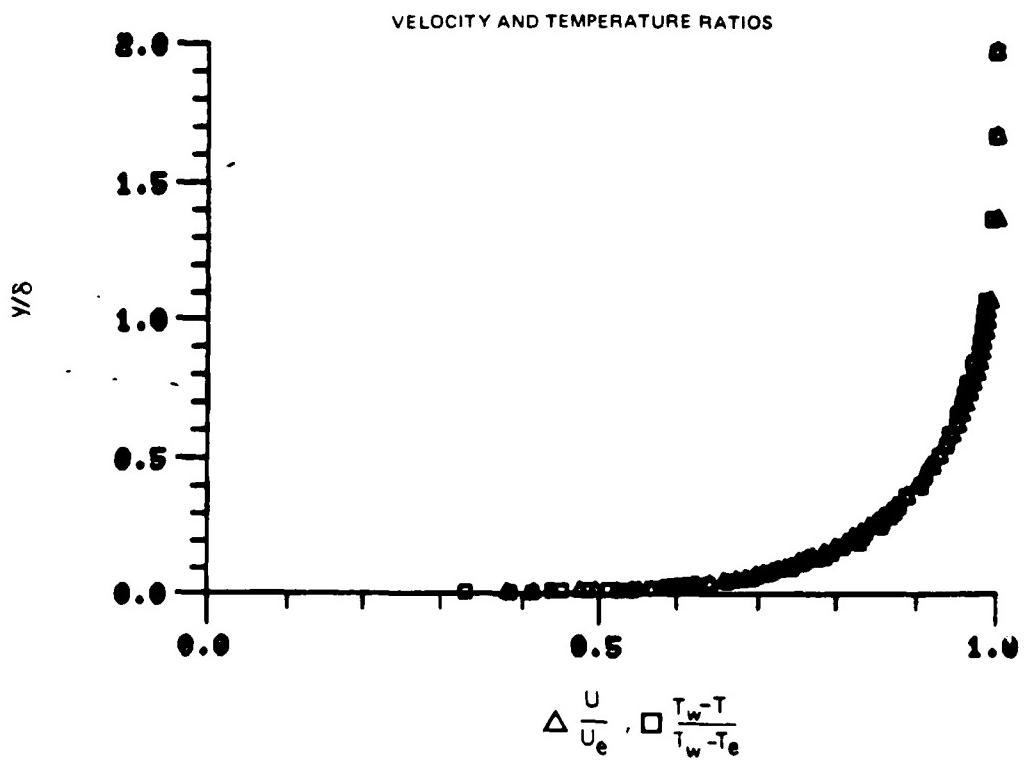


Figure 55. Boundary Layer Velocity and Temperature Profiles
Run No. 6 Point No. 12

78-12-100-1

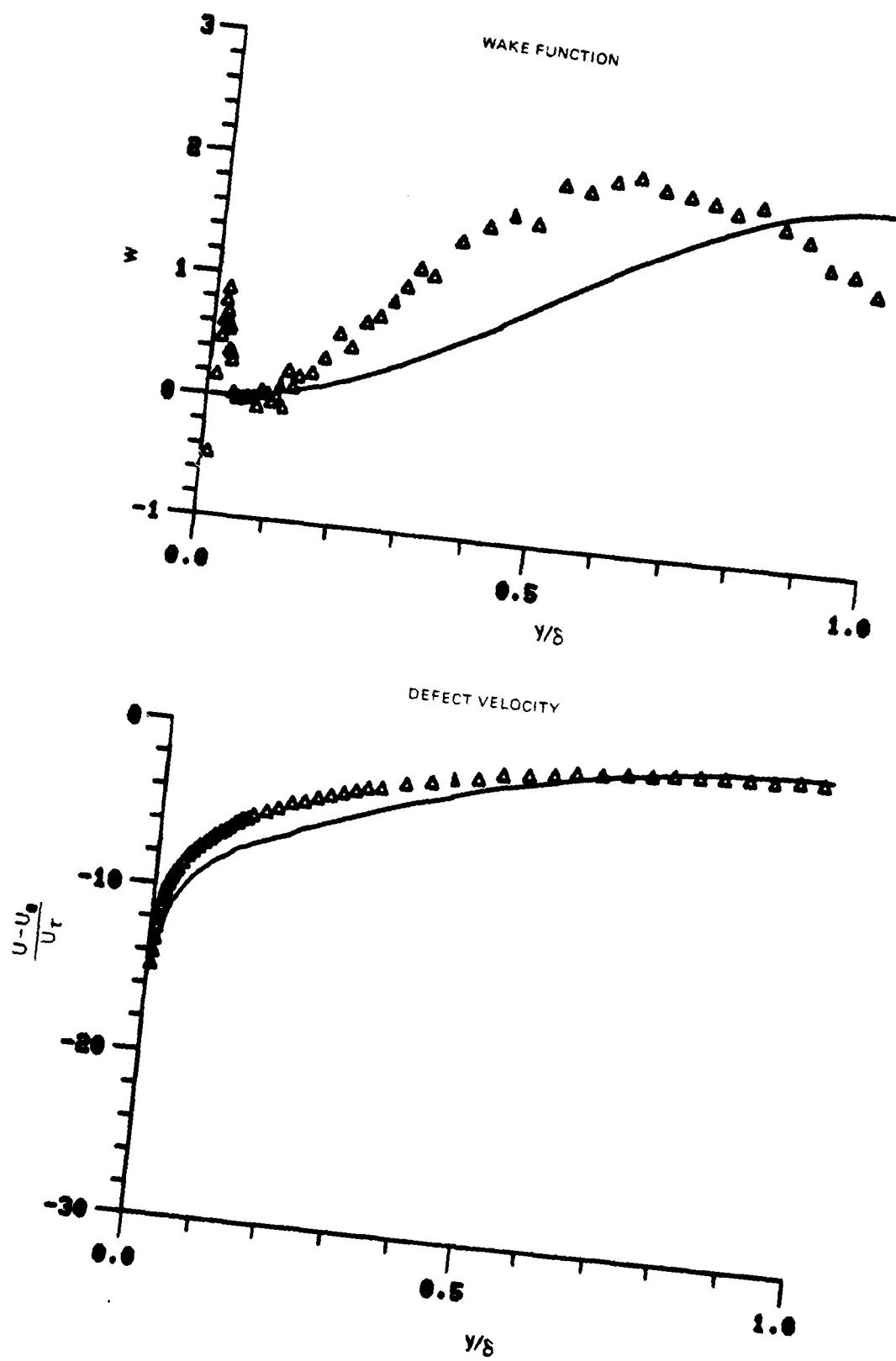


Figure 55. Boundary Layer Velocity Profiles
Run No. 6 Point No. 12

78-12-100-2

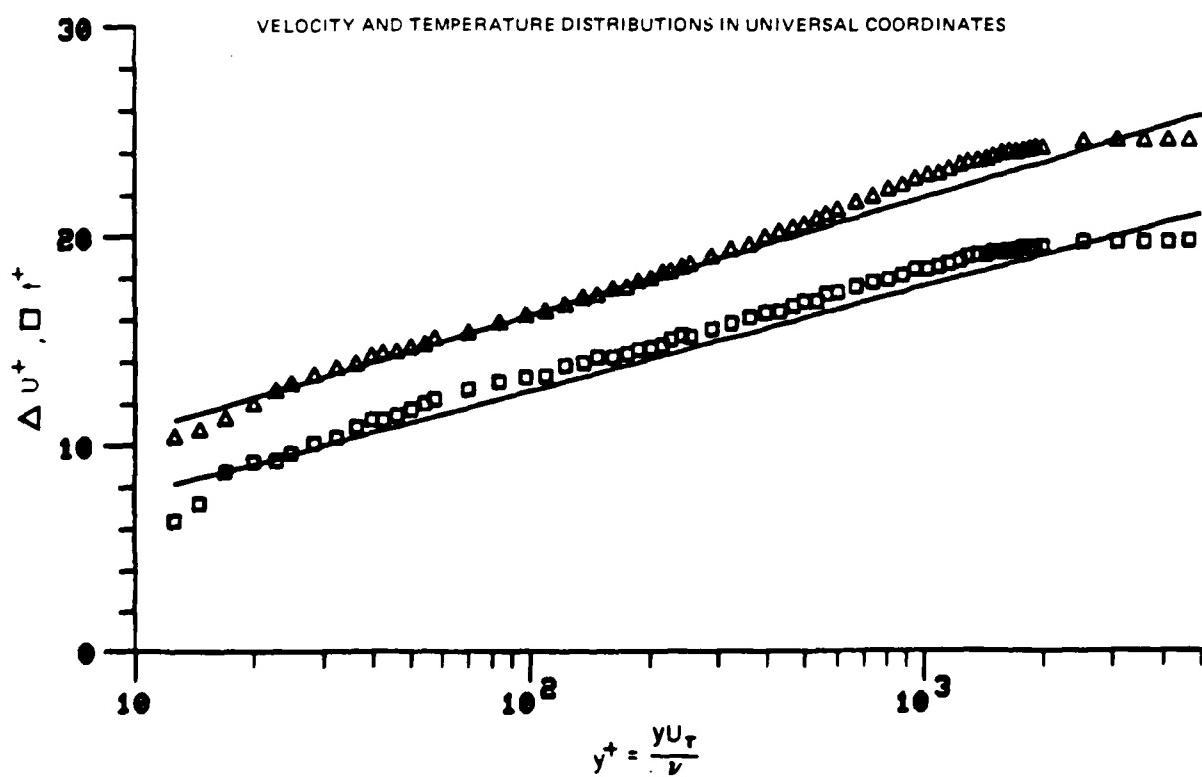
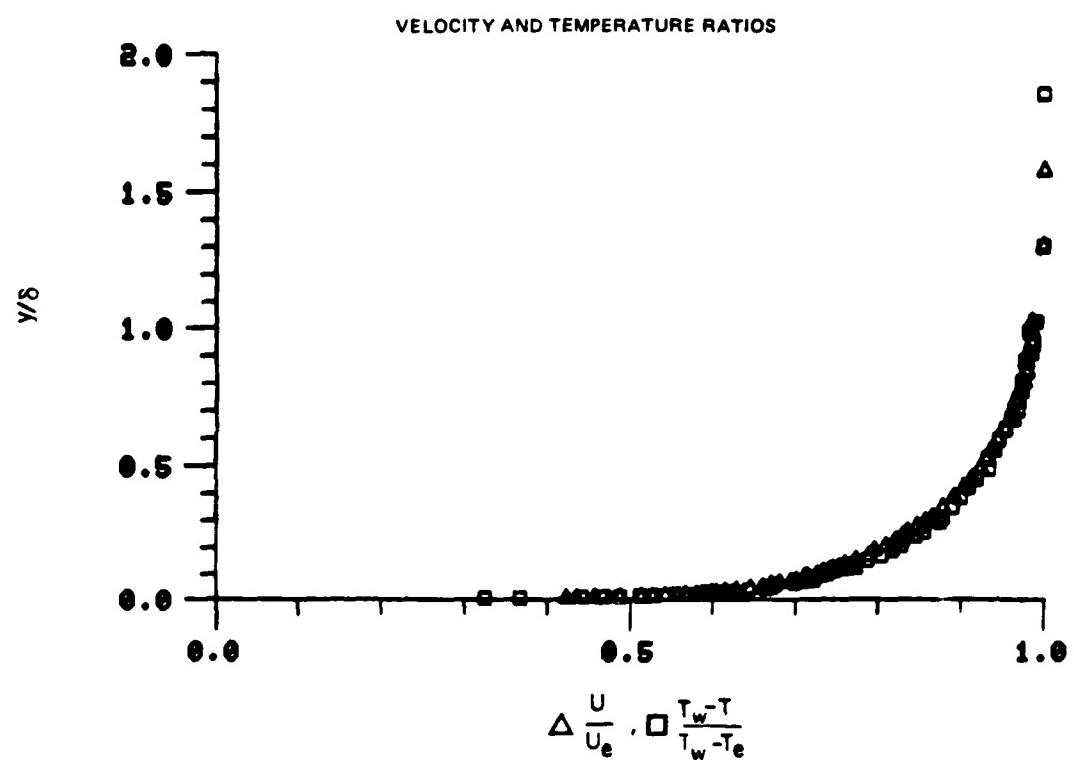


Figure 56. Boundary Layer Velocity and Temperature Profiles
Run No.10 Point No. 6

78-12-100-1

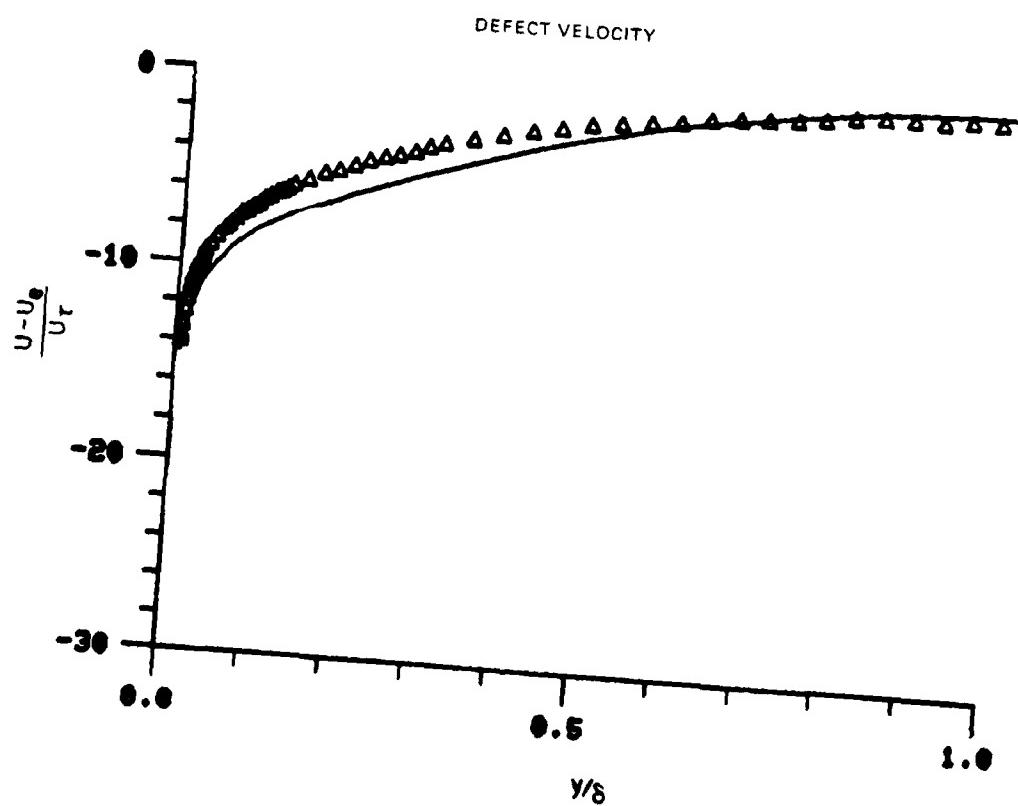
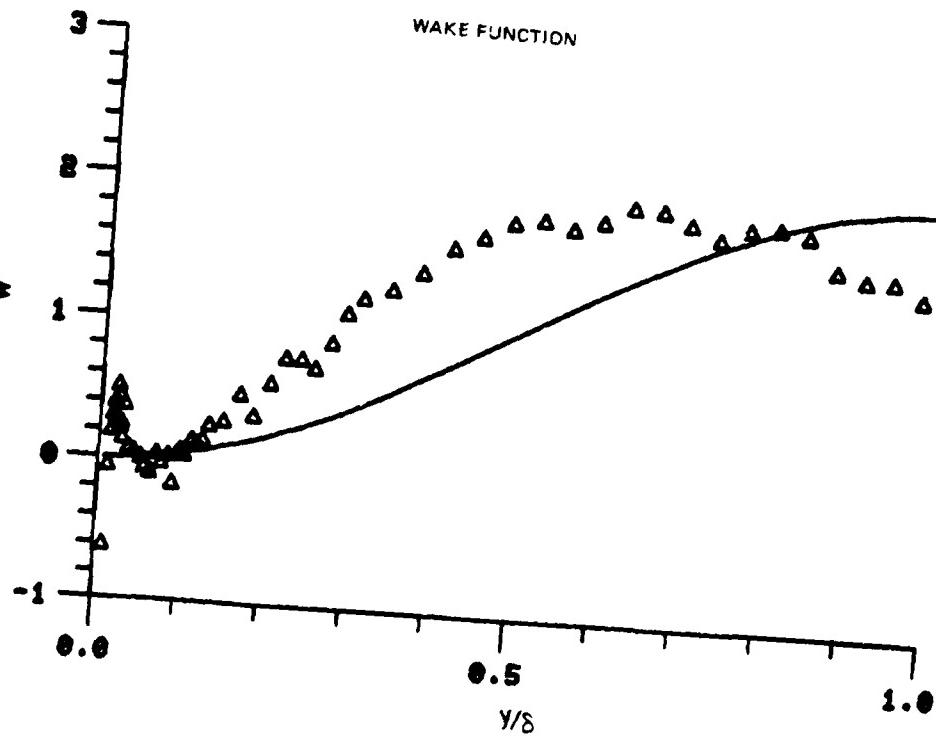


Figure 56. Boundary Layer Velocity Profiles
Run No. 10 Point No. 6

78-12-100-2

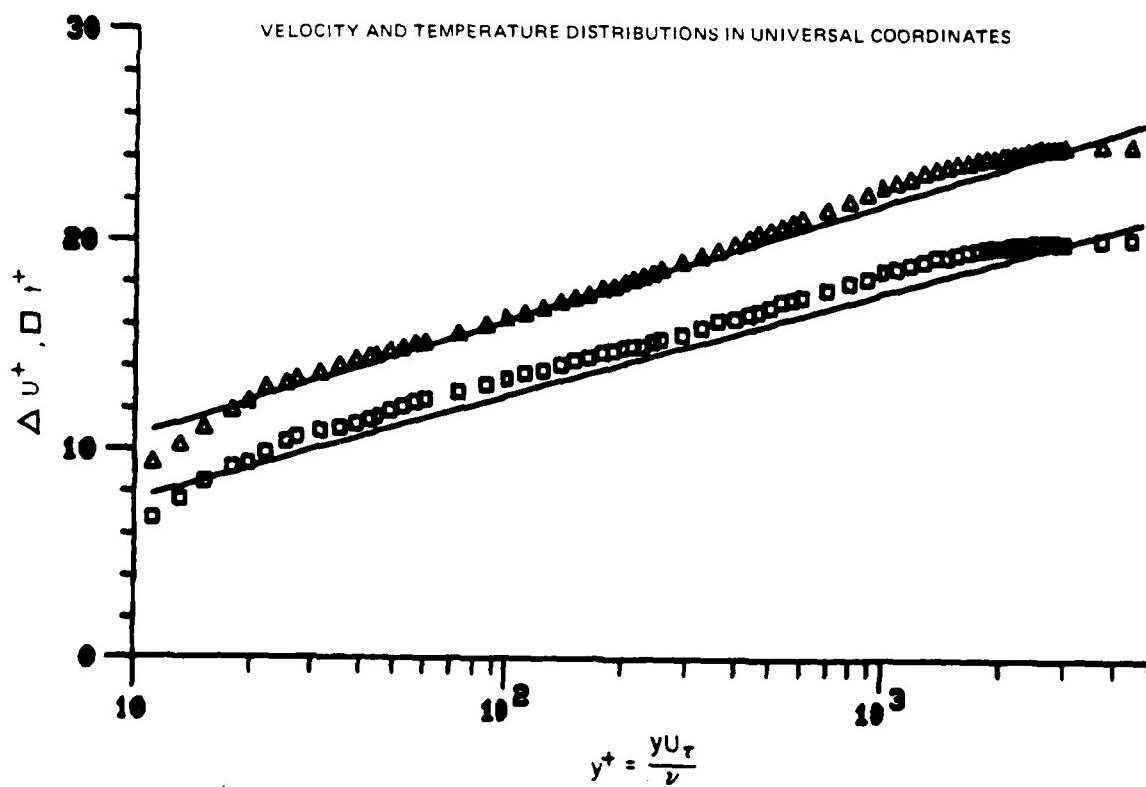
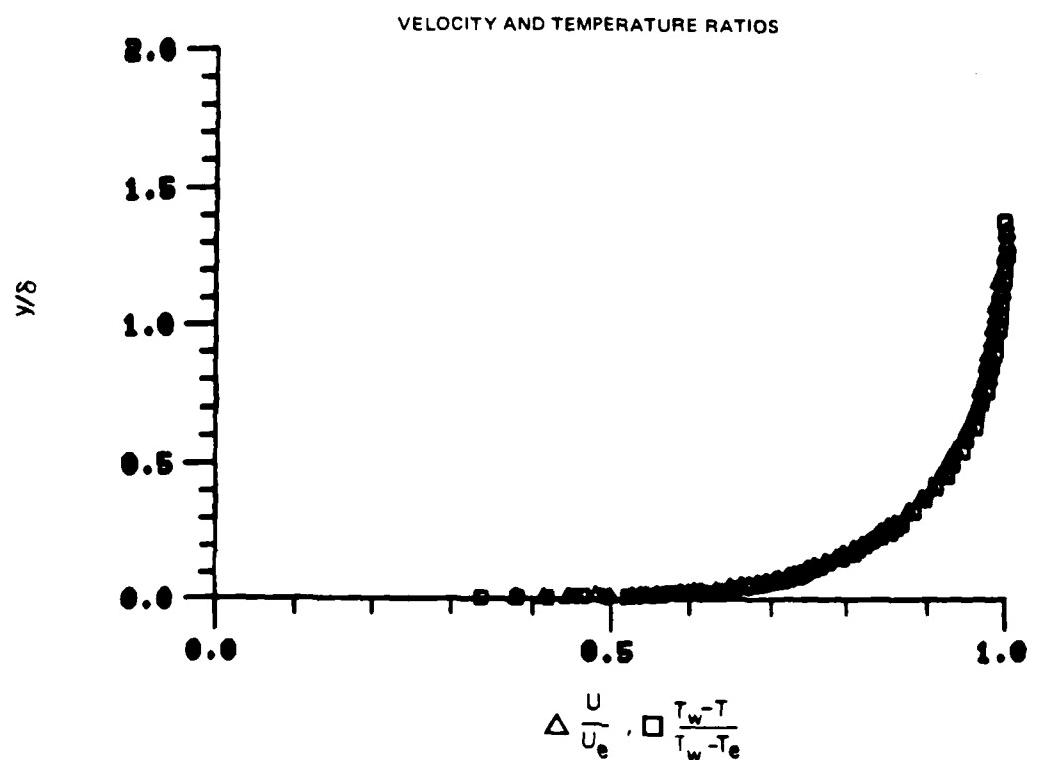


Figure 57. Boundary Layer Velocity and Temperature Profiles
Run No. 6 Point No. 15

78-12-100-1

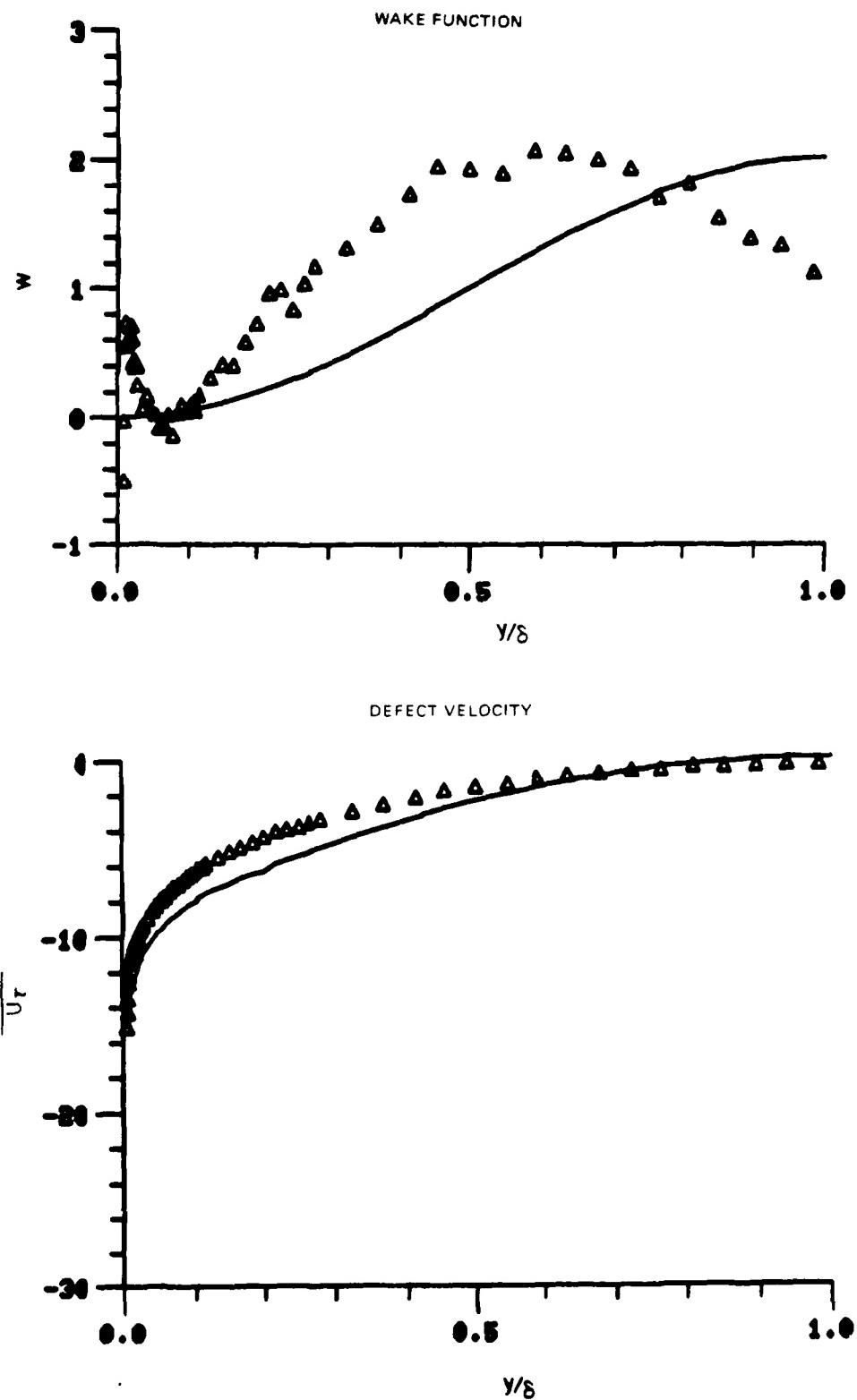


Figure 57. Boundary Layer Velocity Profiles
Run No. 6 Point No. 15

78-12-100-2

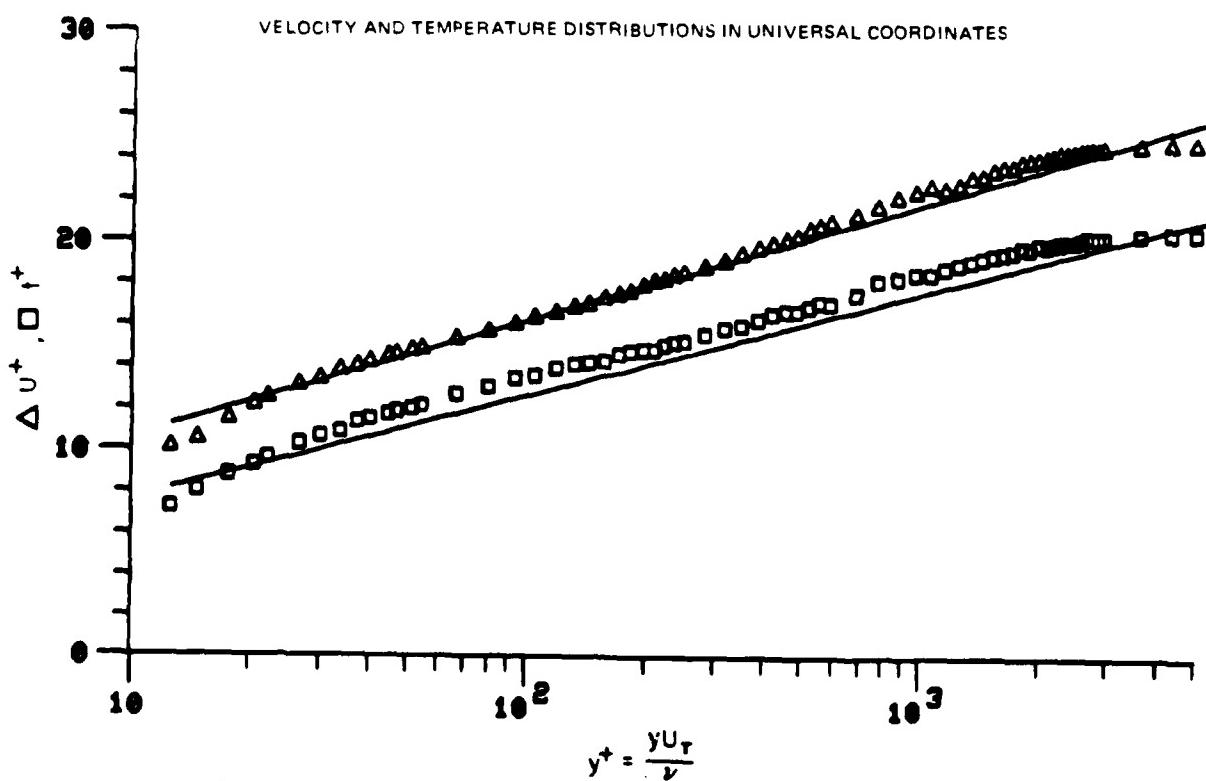
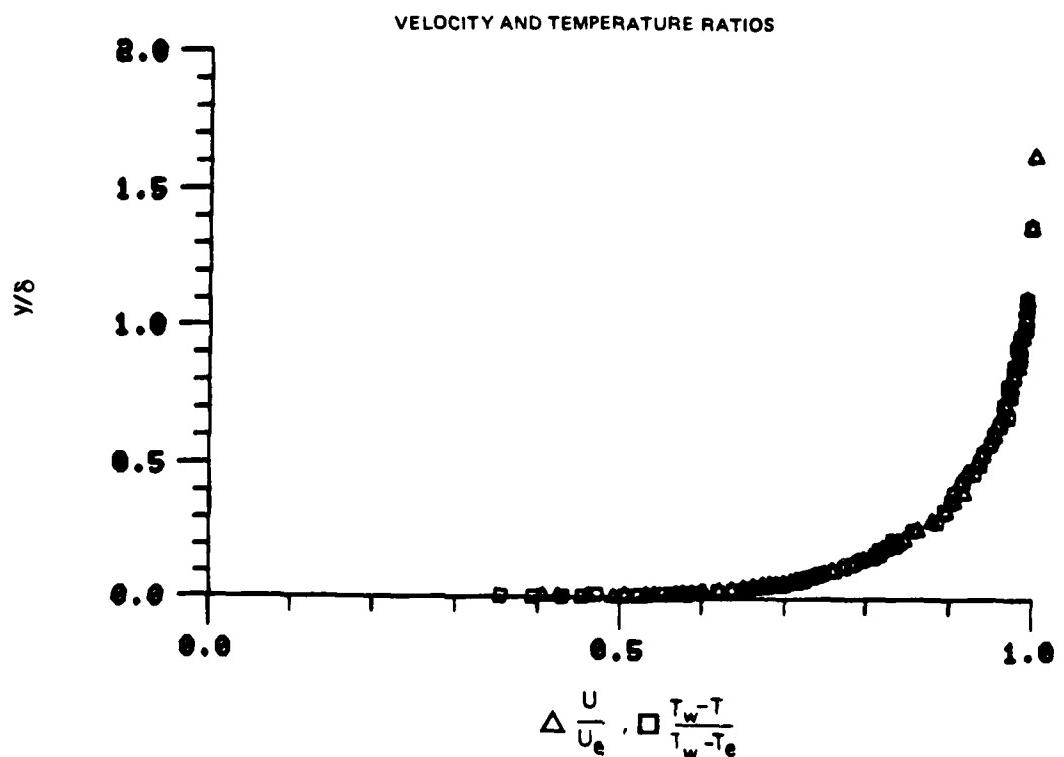


Figure 58. Boundary Layer Velocity and Temperature Profiles
Run No. 10 Point No. 7

78-12-100-1

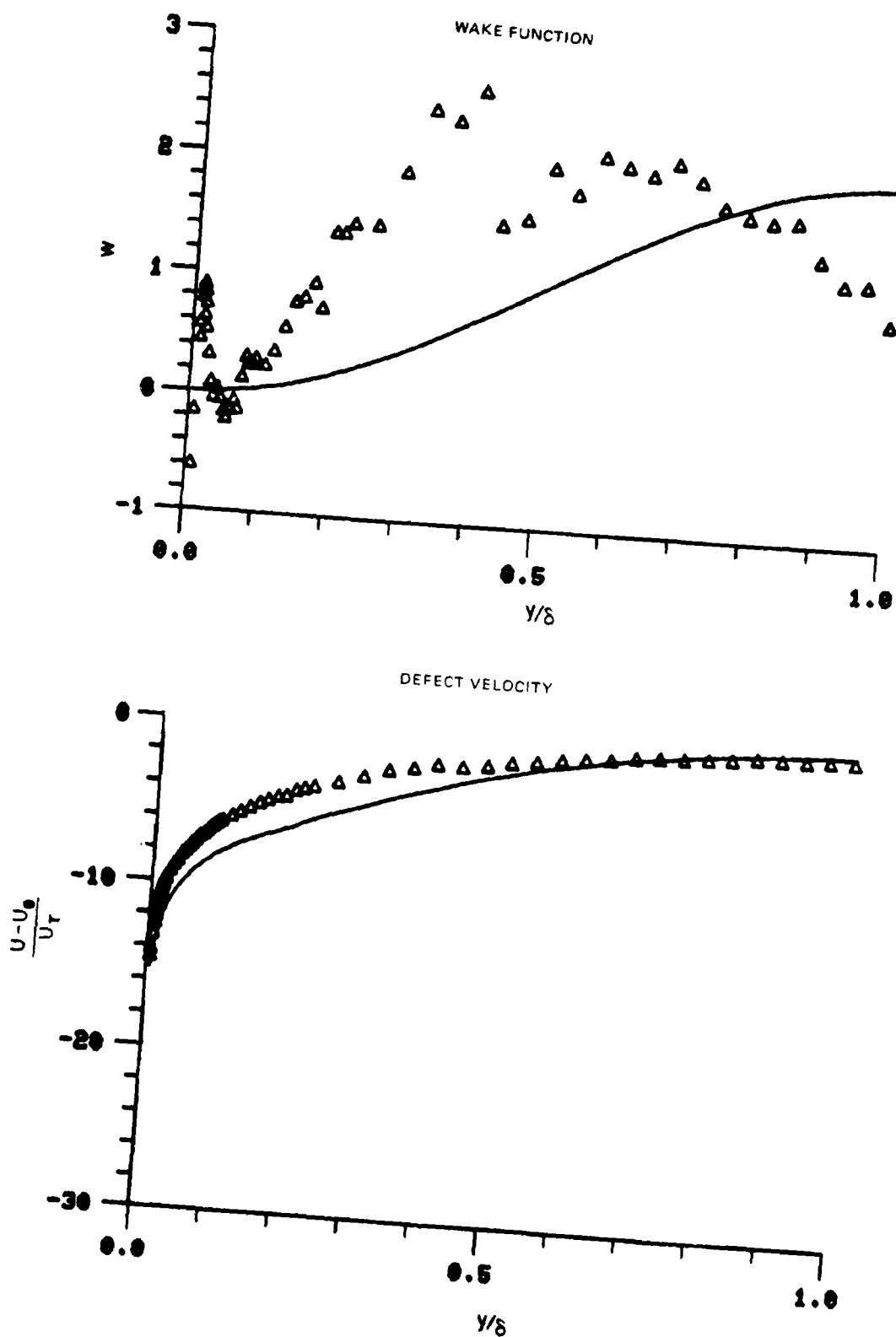


Figure 58. Boundary Layer Velocity Profiles
Run No. 10 Point No. 7

78-12-100-2

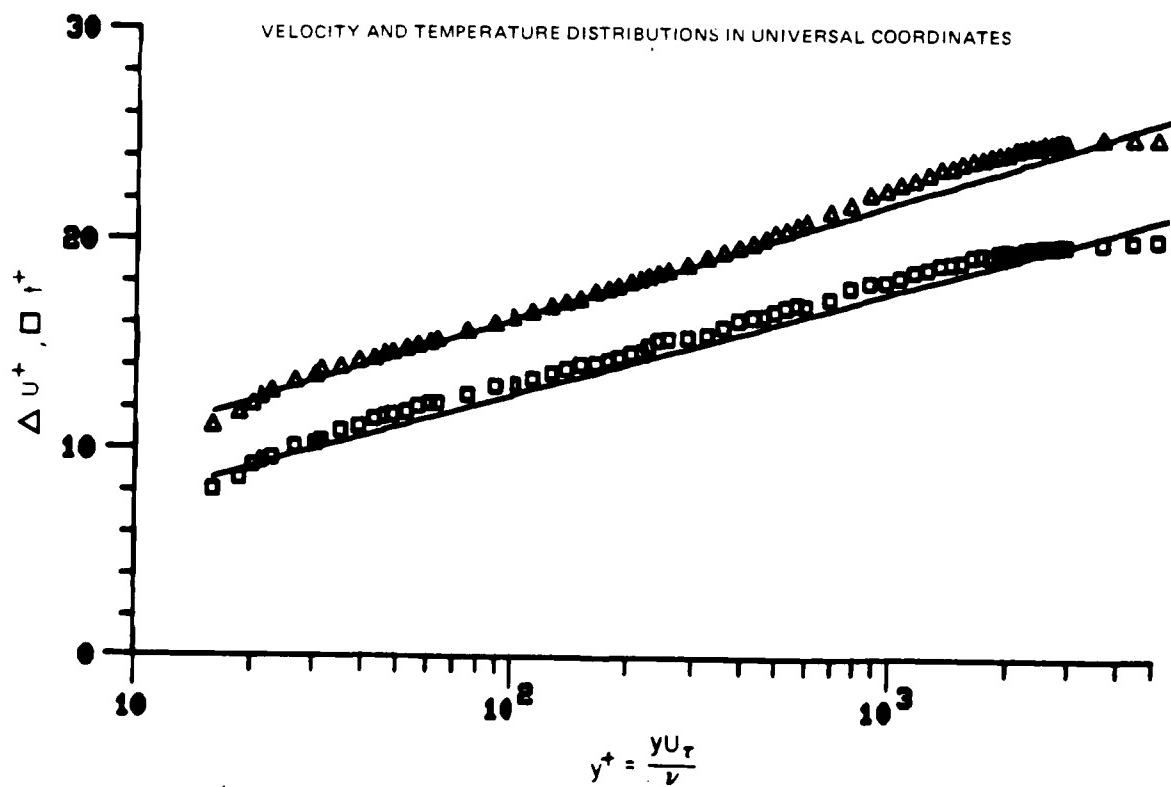
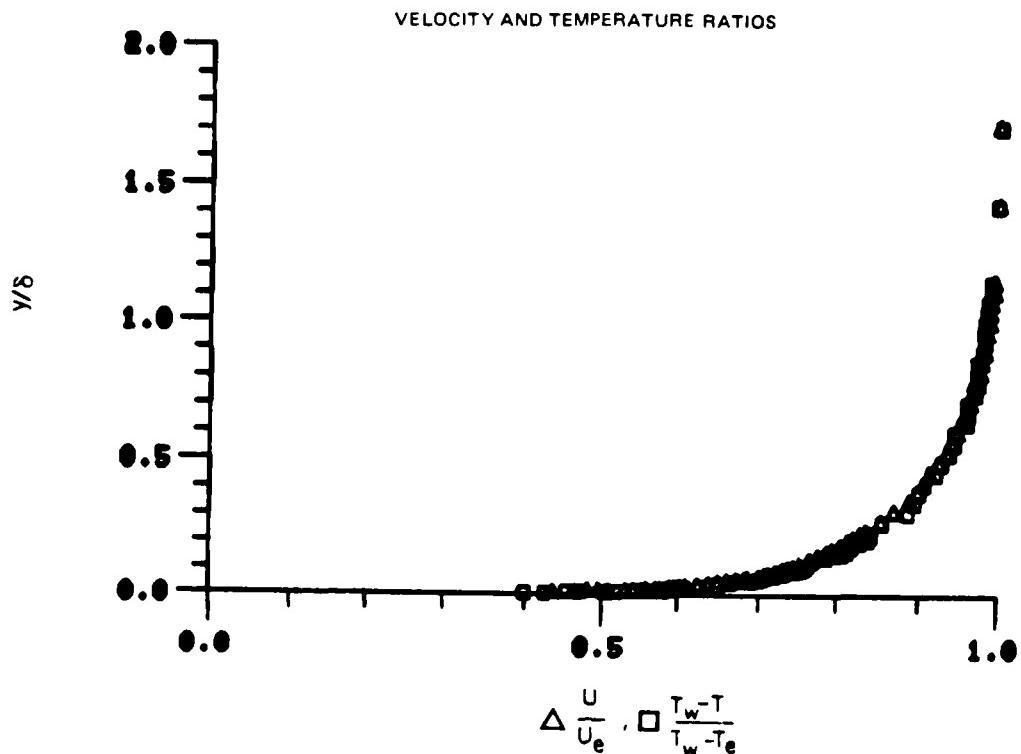


Figure 59. Boundary Layer Velocity and Temperature Profiles
Run No. 6 Point No. 18

78-12-100-1

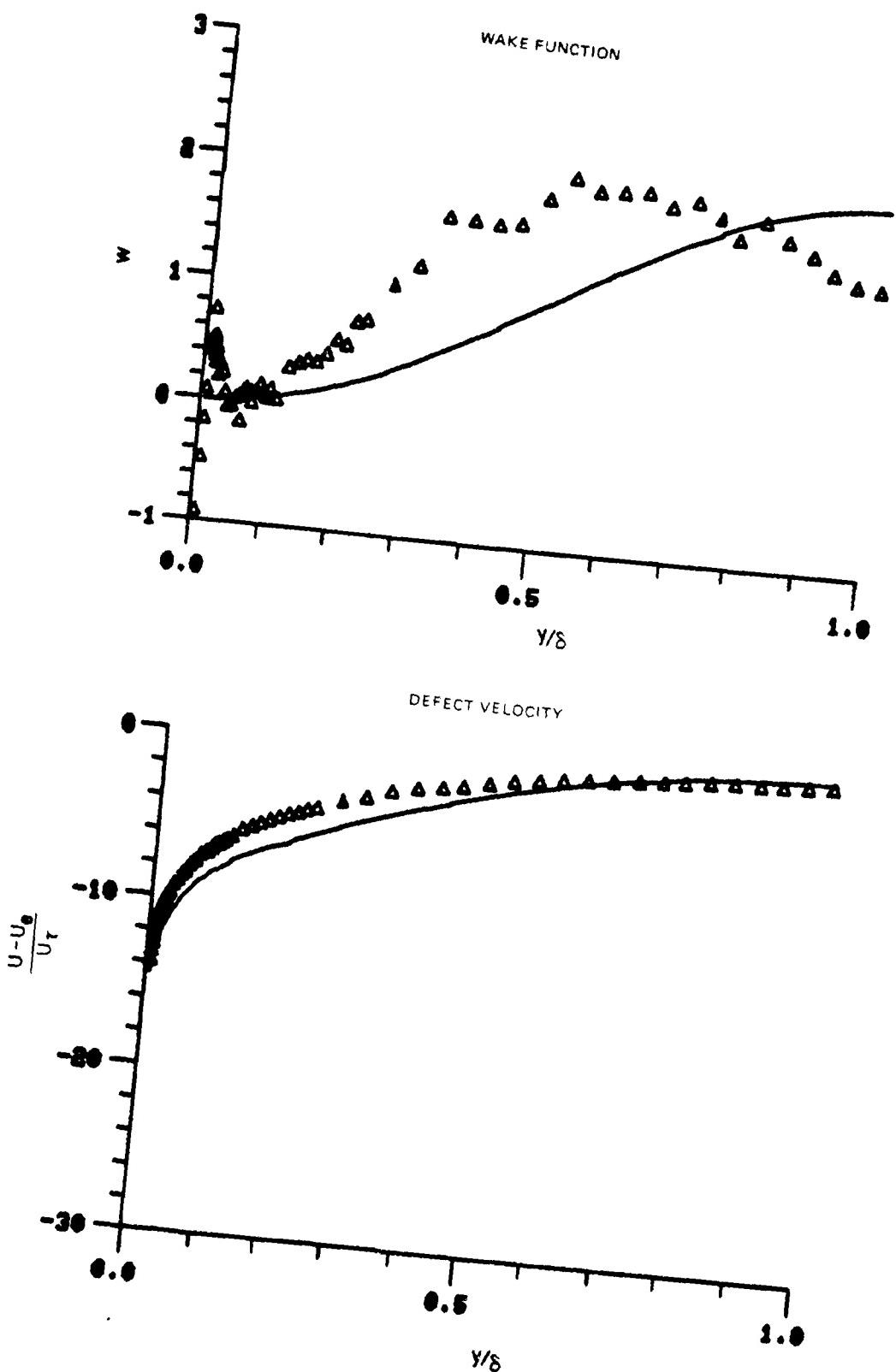


Figure 59. Boundary Layer Velocity Profiles
Run No. 6 Point No. 18

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DATA REPORT, VOLUME I, VELOCITY AND TEMPERATURE PROFILE DATA FO--ETC(1)

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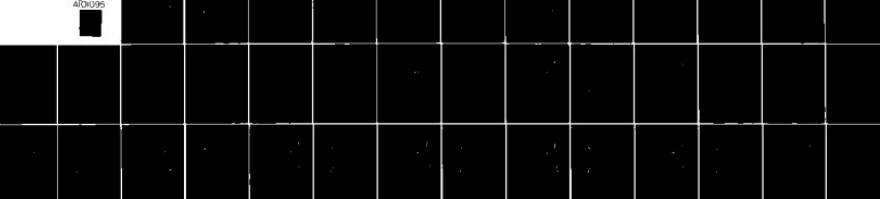
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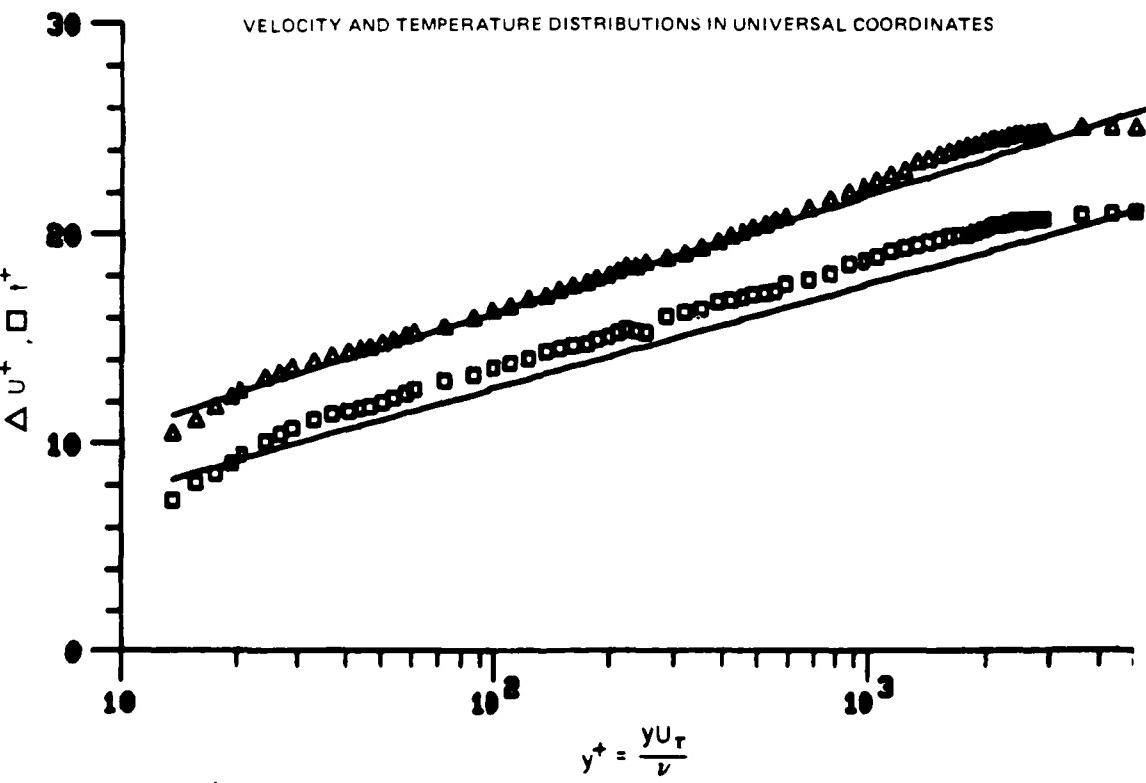
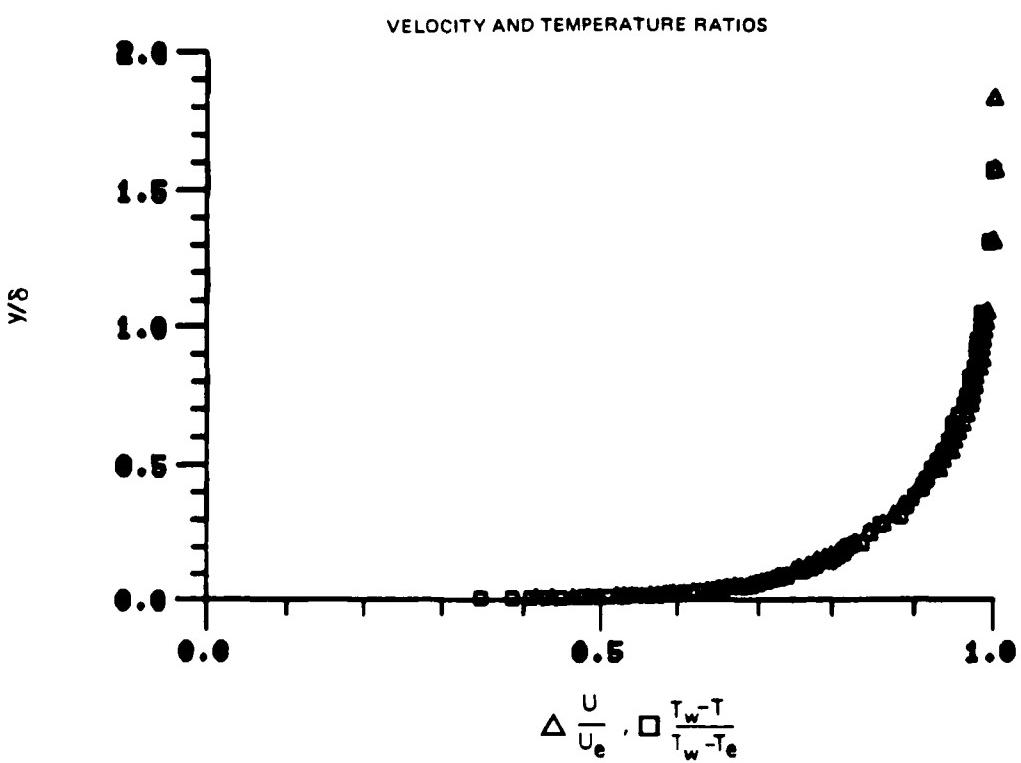


Figure 60. Boundary Layer Velocity and Temperature Profiles
Run No. 6 Point No. 19

78-12-100-1

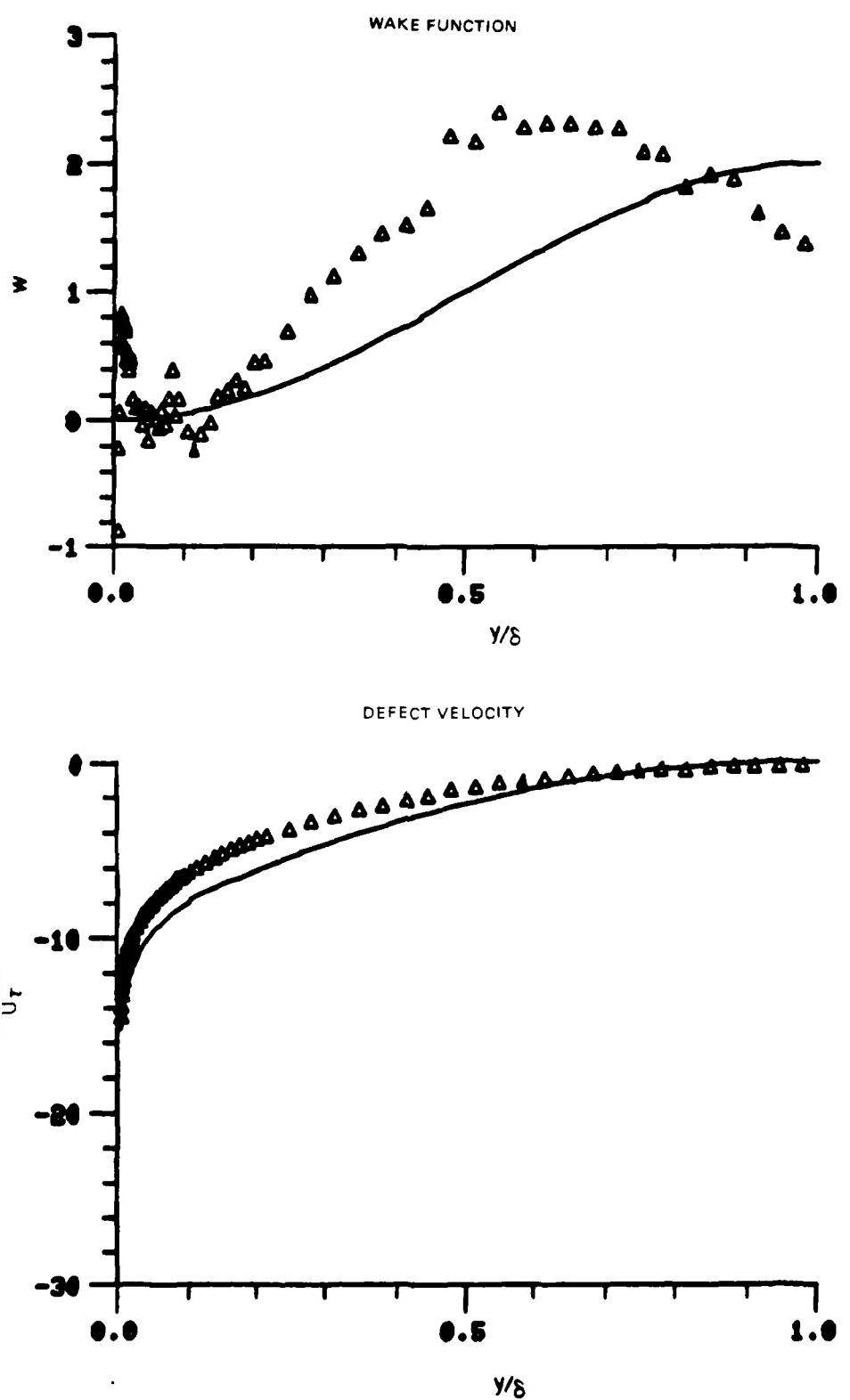


Figure 60. Boundary Layer Velocity Profiles
Run No. 6 Point No. 19

78-12-100-2

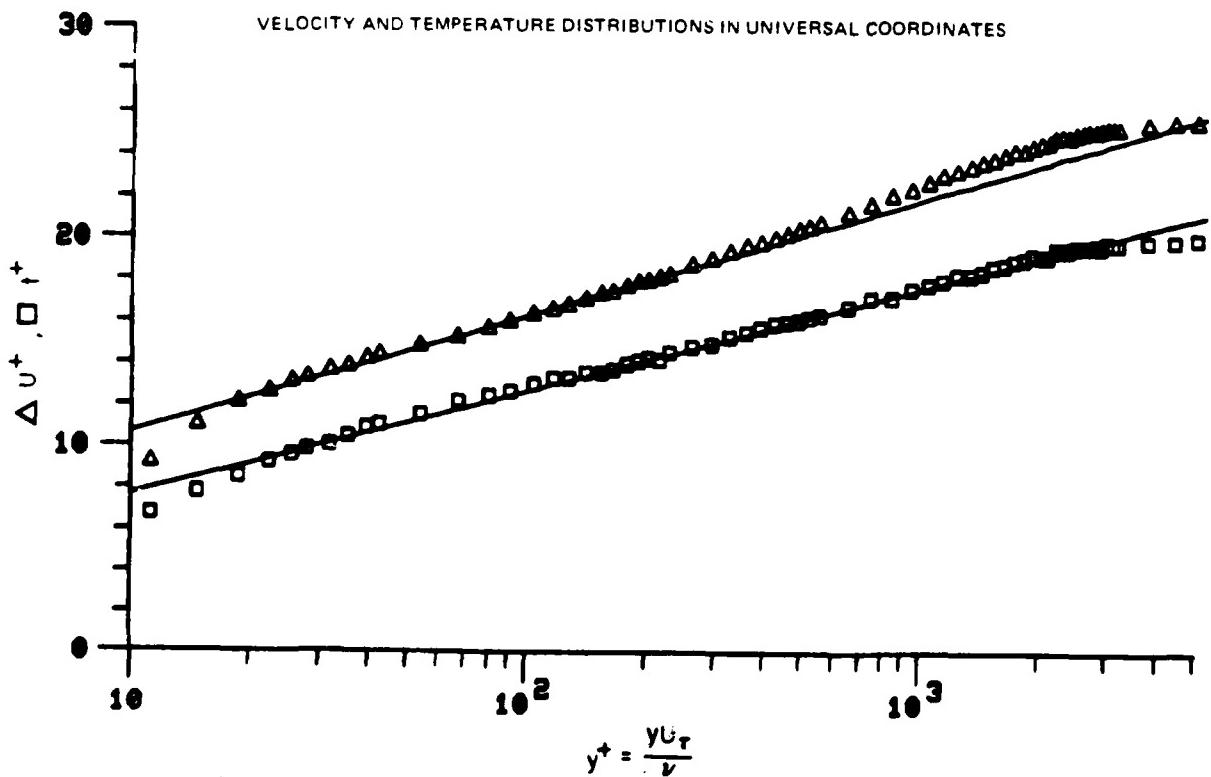
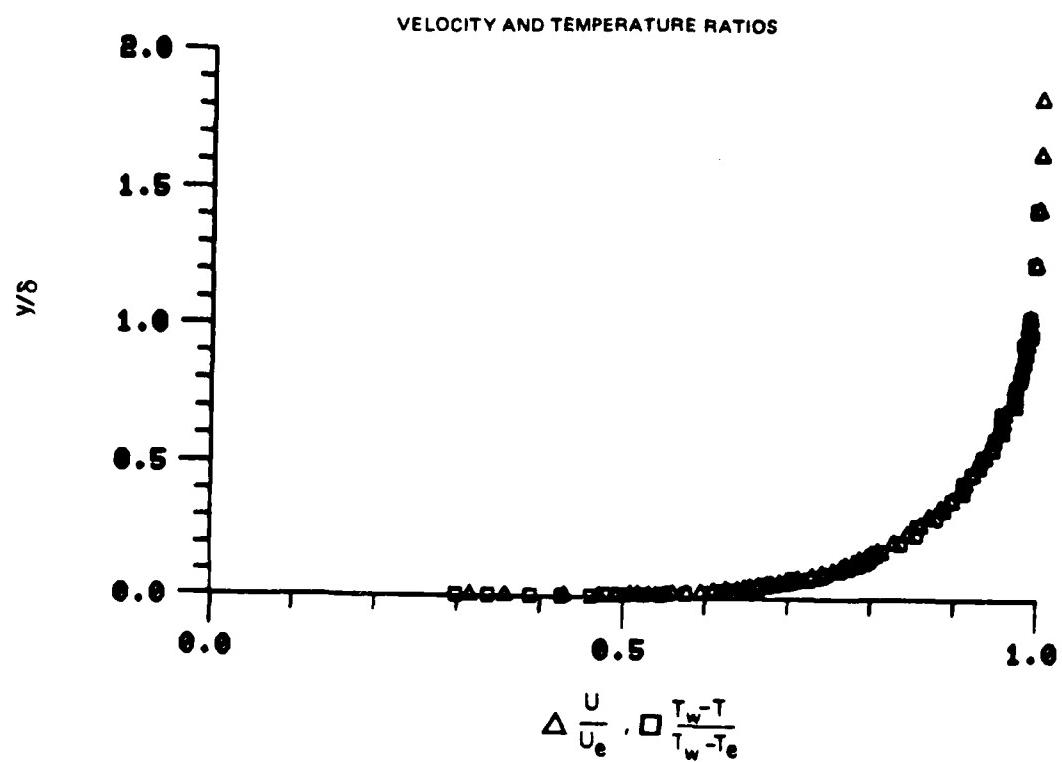


Figure 61. Boundary Layer Velocity and Temperature Profiles

Run No. 10 Point No. 9

78-12-100-1

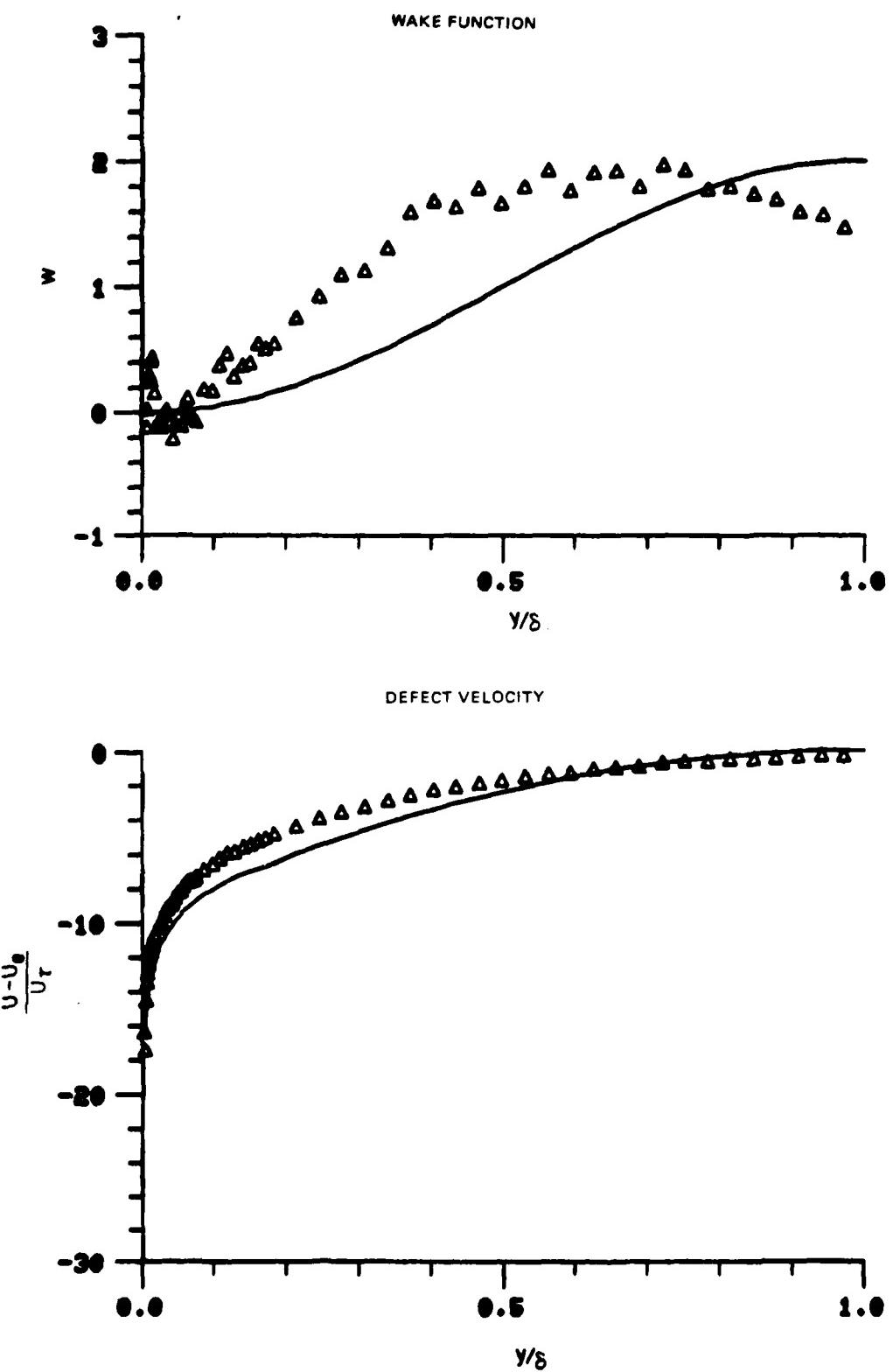


Figure 61. Boundary Layer Velocity Profiles
Run No. 10 Point No. 9

78-12-100-2

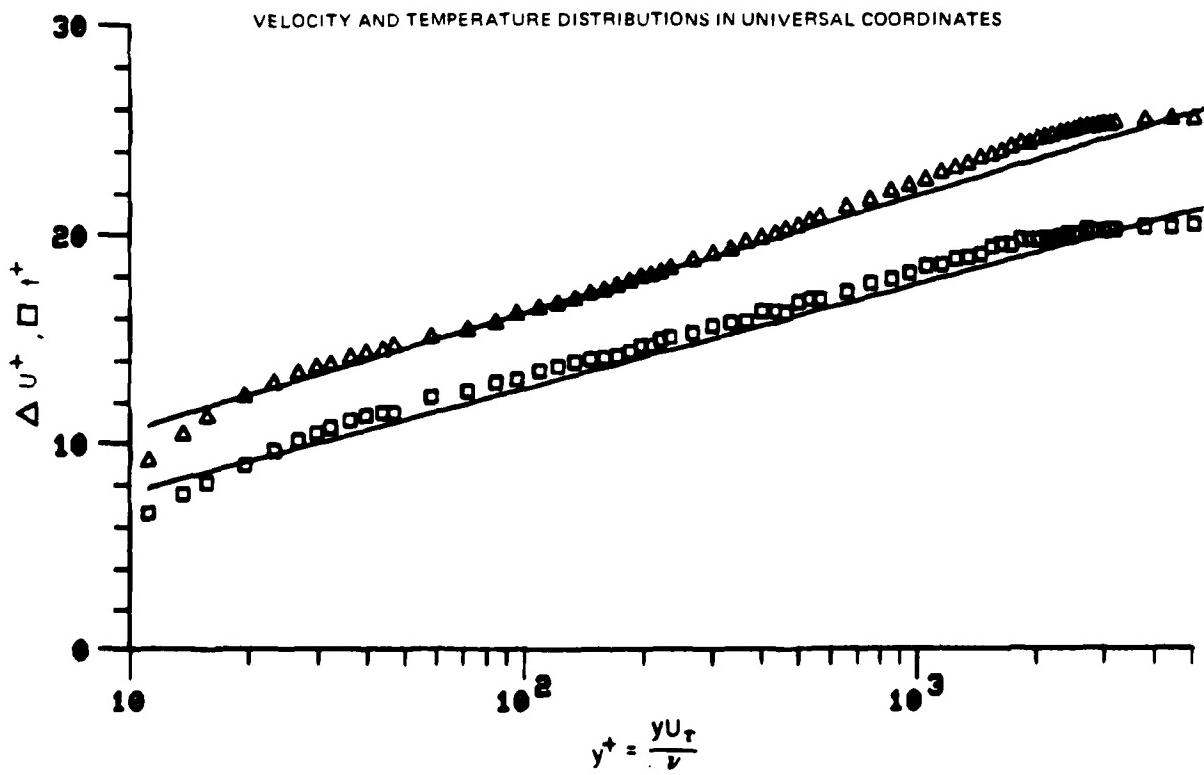
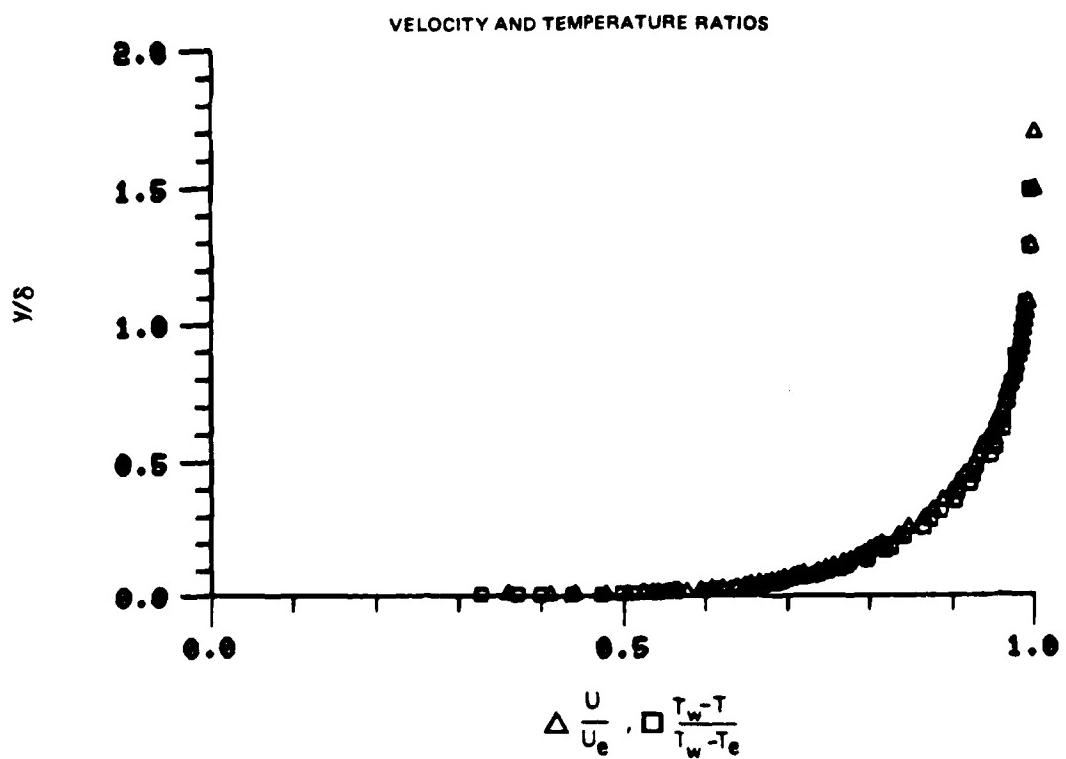


Figure 62. Boundary Layer Velocity and Temperature Profiles
Run No. 10 Point No. 10

78-12-100-1

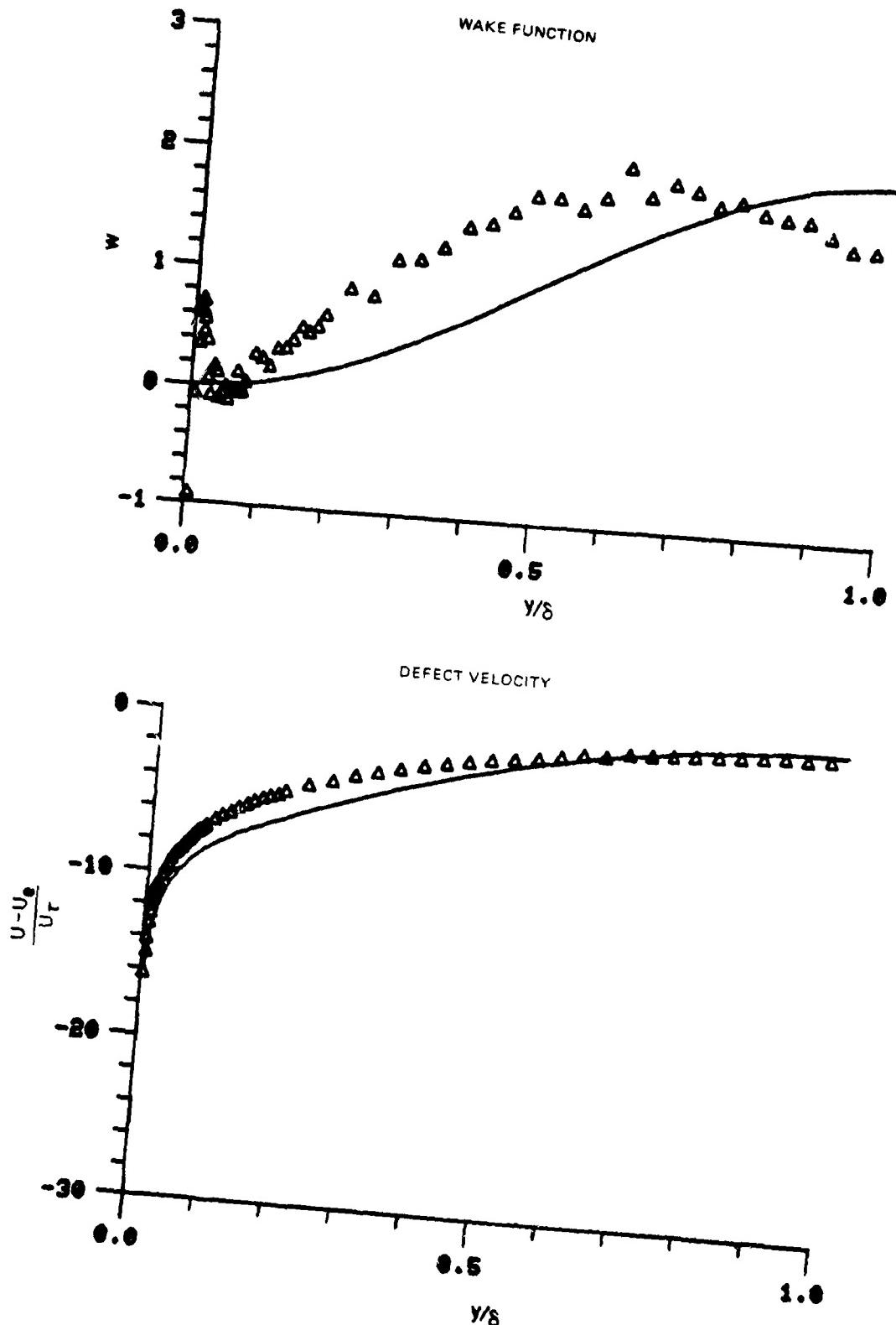


Figure 62. Boundary Layer Velocity Profiles
Run No. 10 Point No. 10

78-12-100-2

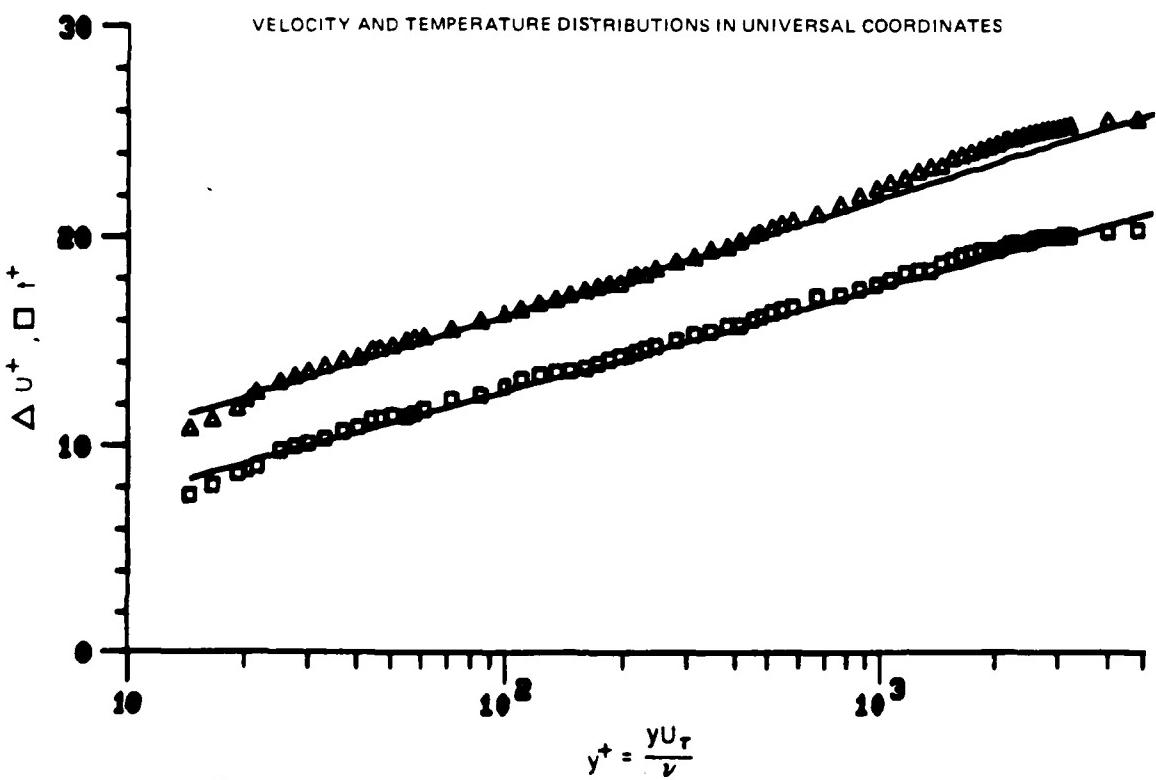
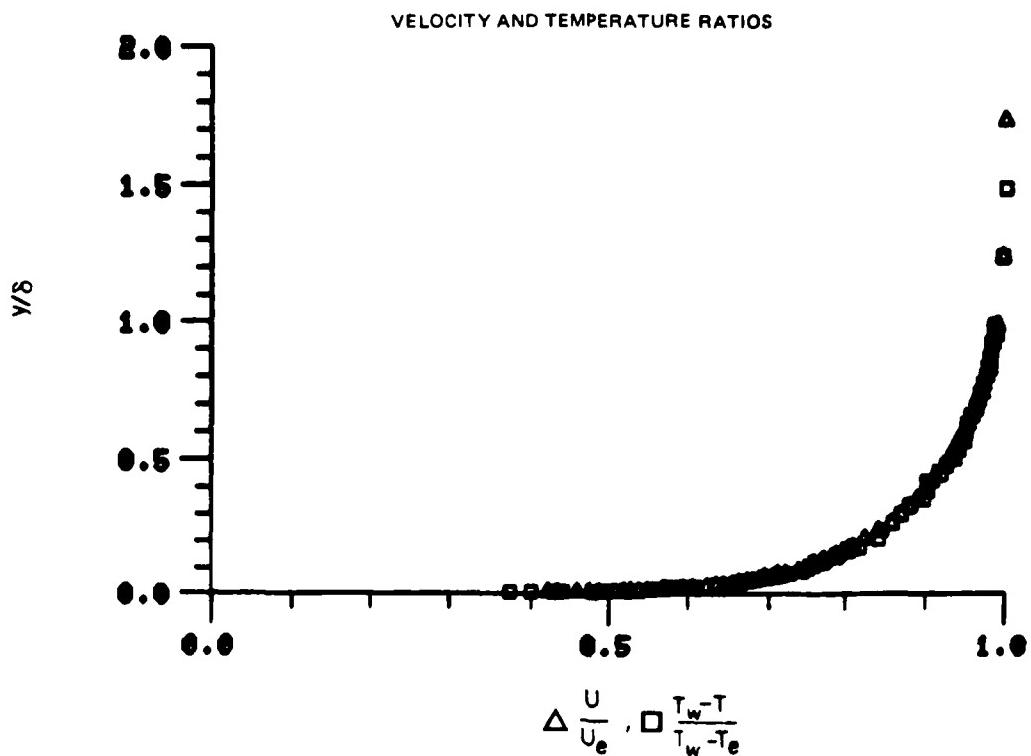


Figure 63. Boundary Layer Velocity and Temperature Profiles
Run No. 6 Point No. 24

78-12-100-1

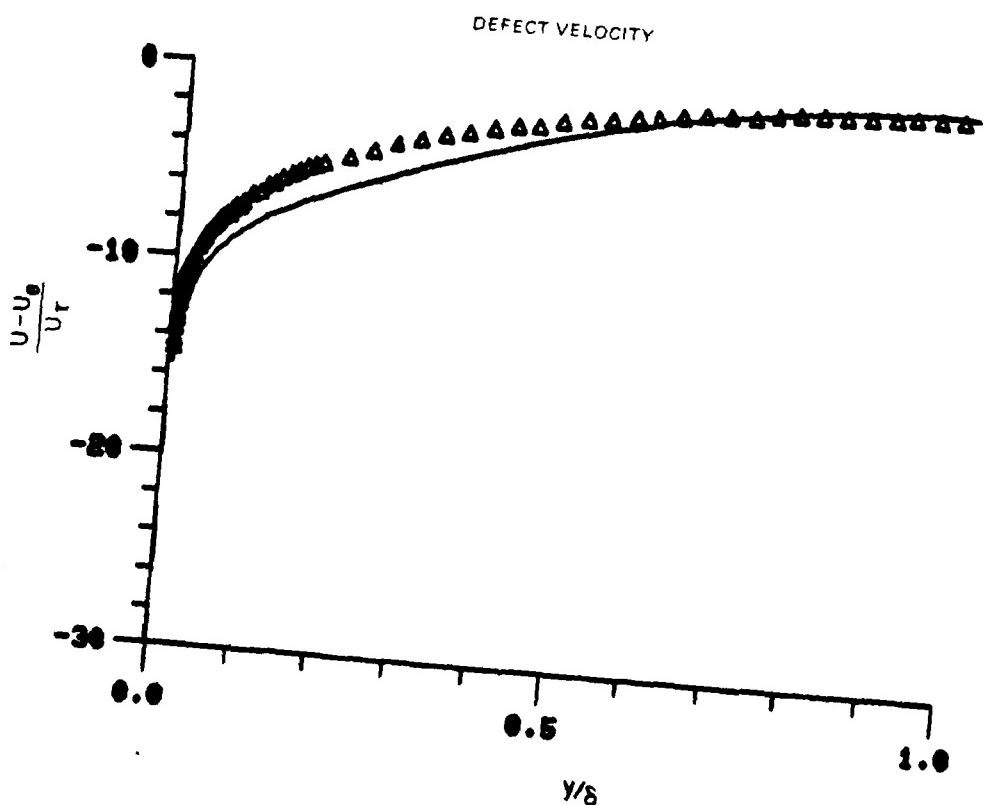
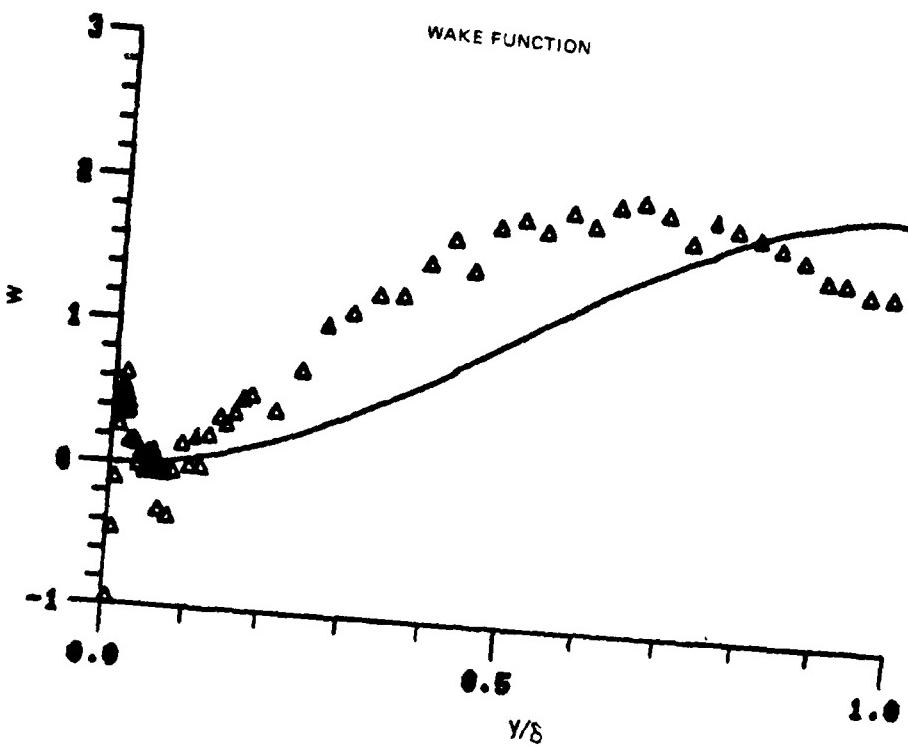


Figure 63. Boundary Layer Velocity Profiles
Run No. 6 Point No. 24

78-12-100-2

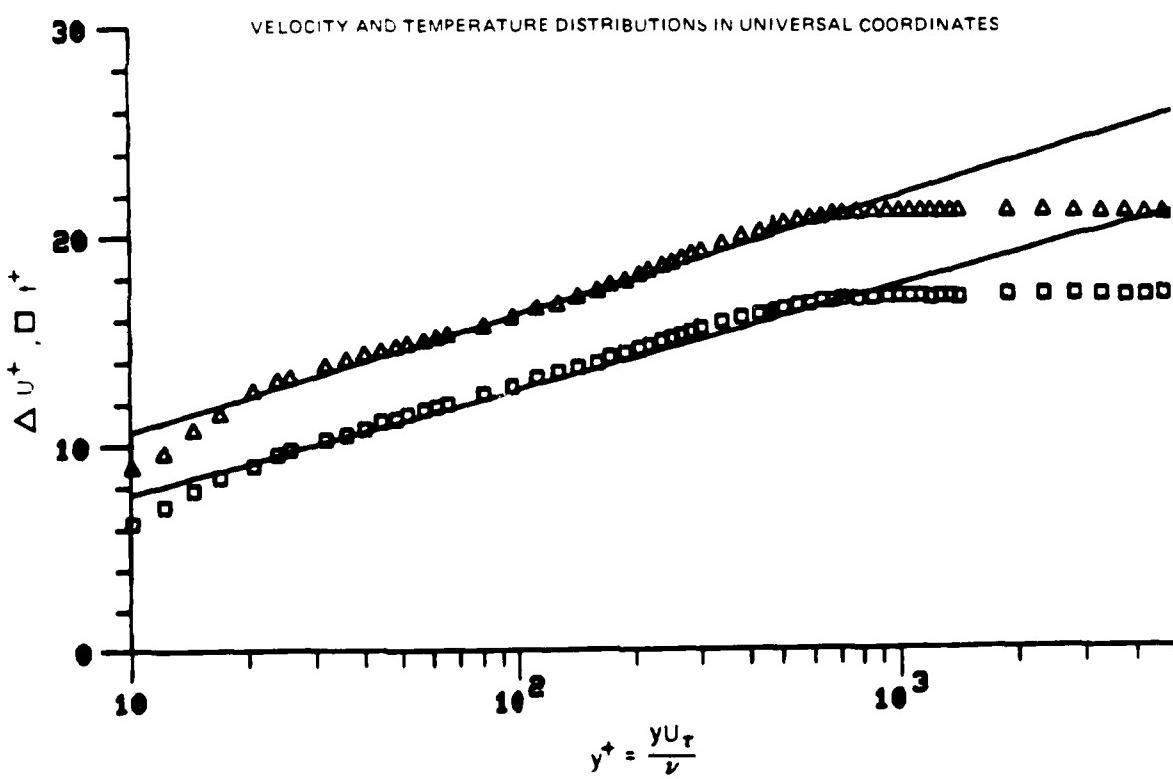
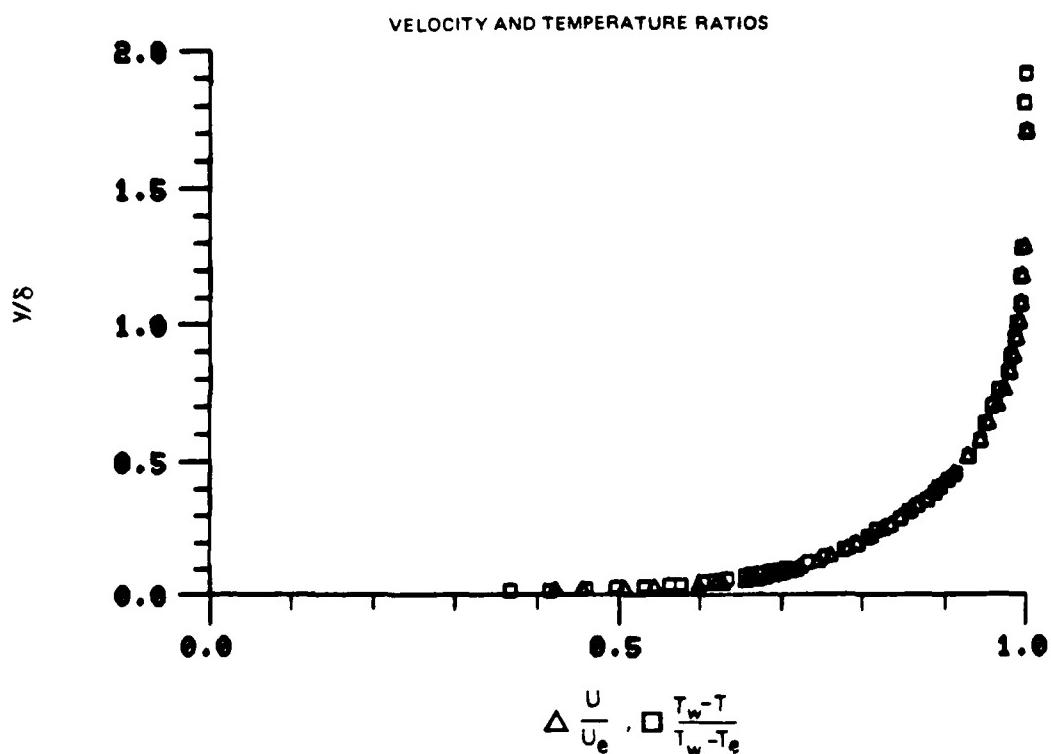


Figure 64. Boundary Layer Velocity and Temperature Profiles
Run No. 9 Point No. 3

78-12-100-1

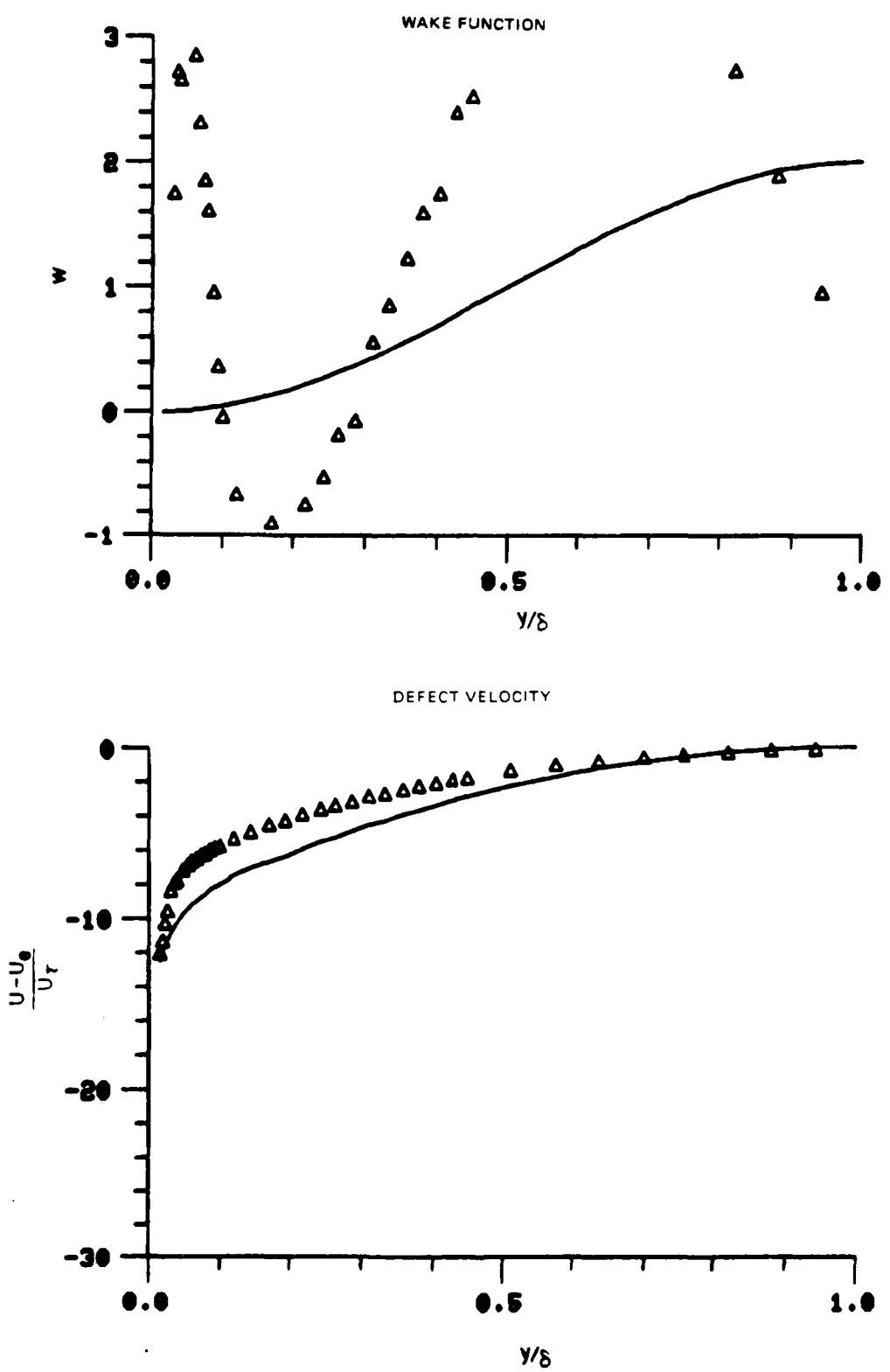


Figure 64. Boundary Layer Velocity Profiles
Run No. 9 Point No. 3

78-12-100-2

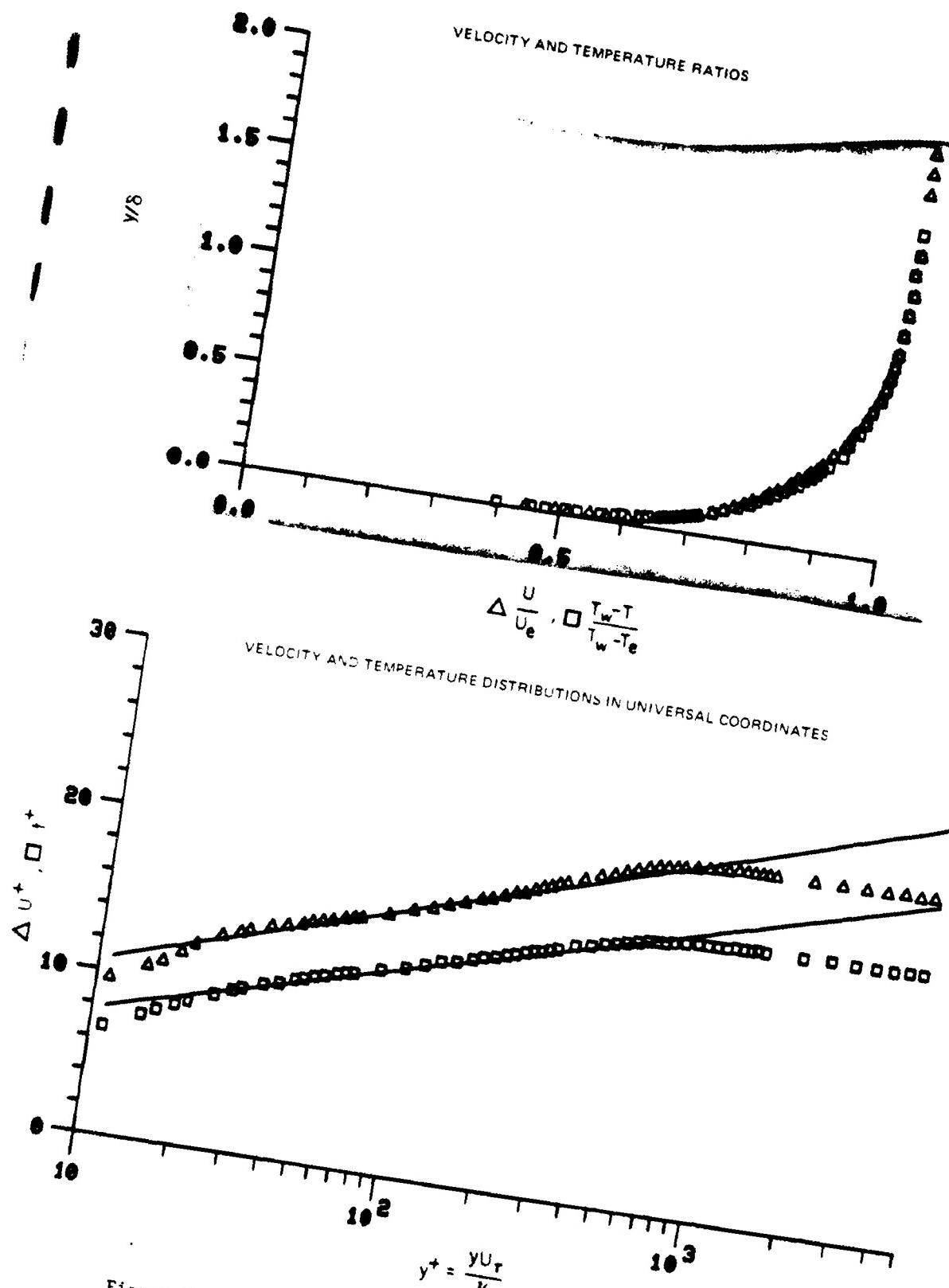


Figure 65. Boundary Layer Velocity and Temperature Profiles
 Run No. 9 Point No. 4

78-12-100-1

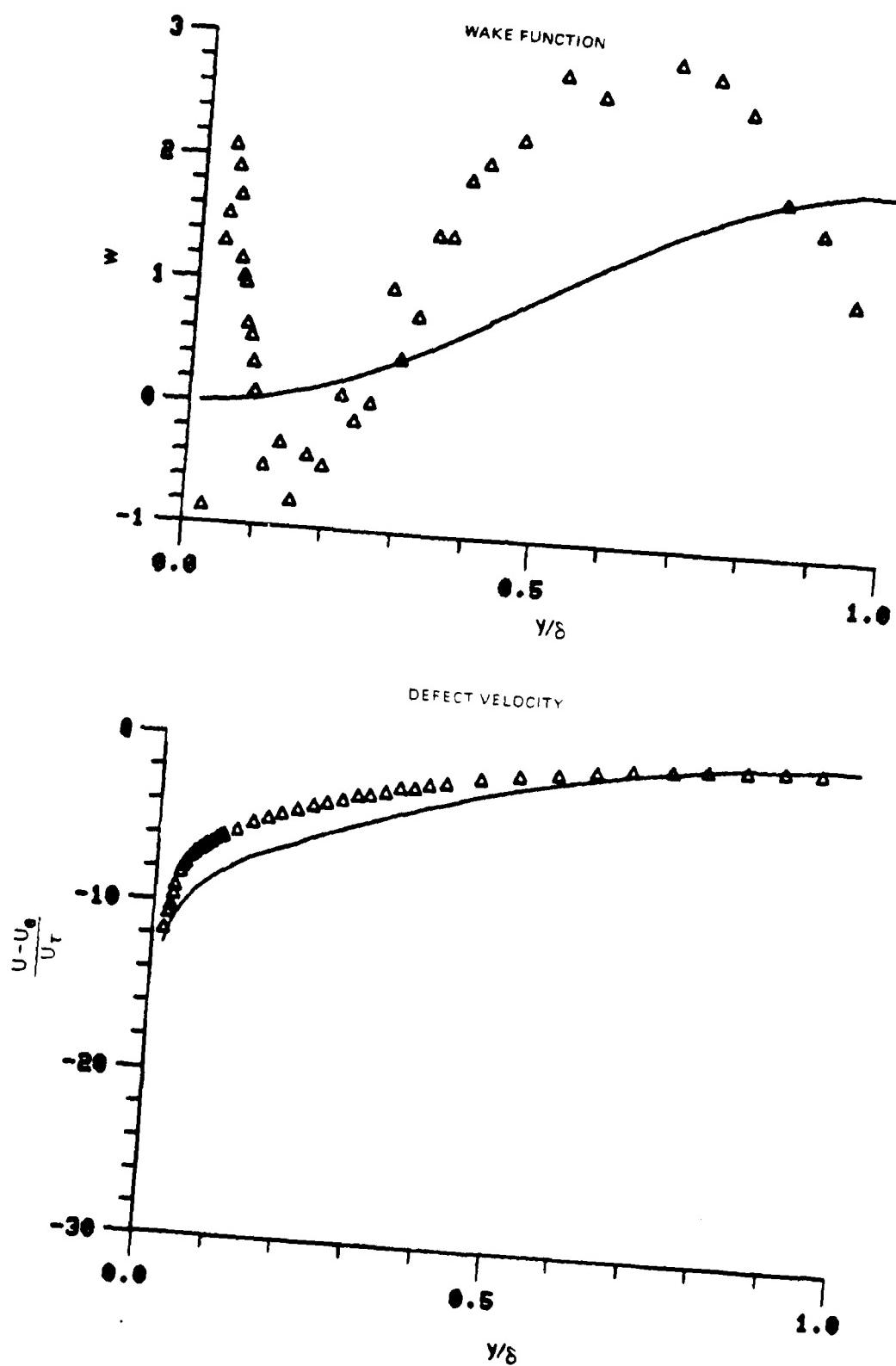


Figure 65. Boundary Layer Velocity Profiles
Run No. 9 Point No. 4

78-12-100-2

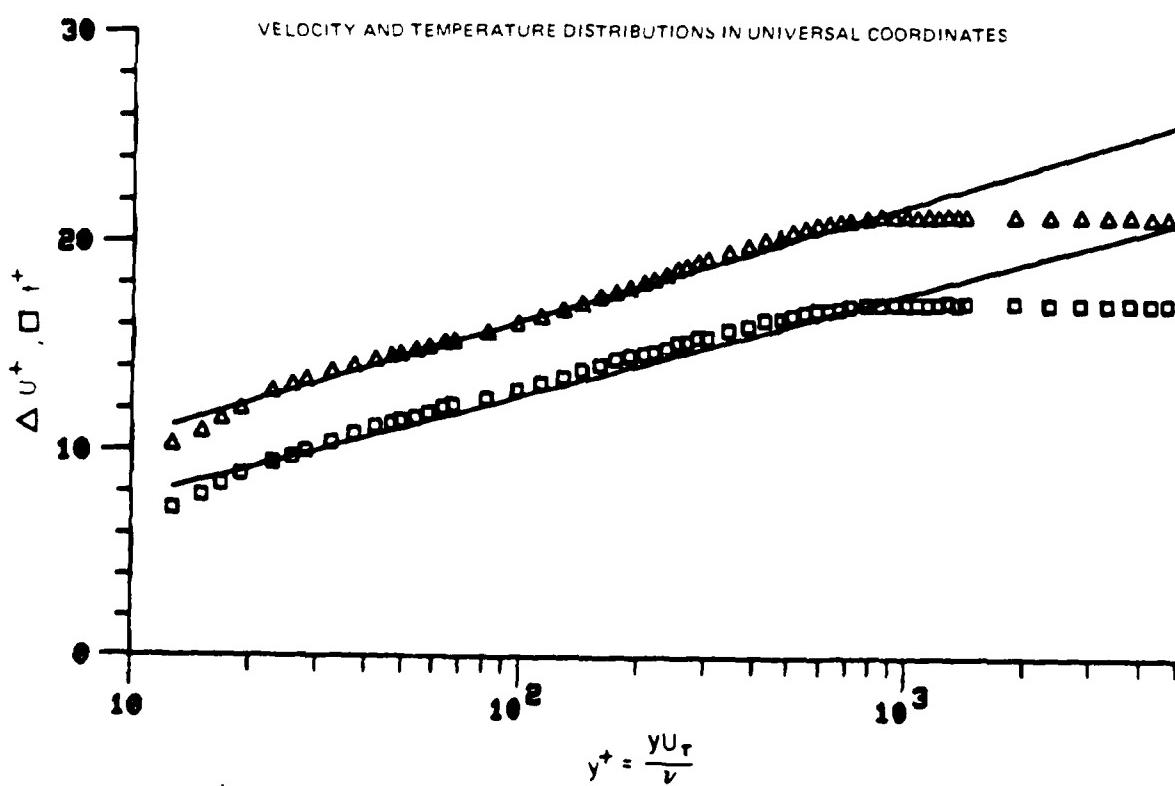
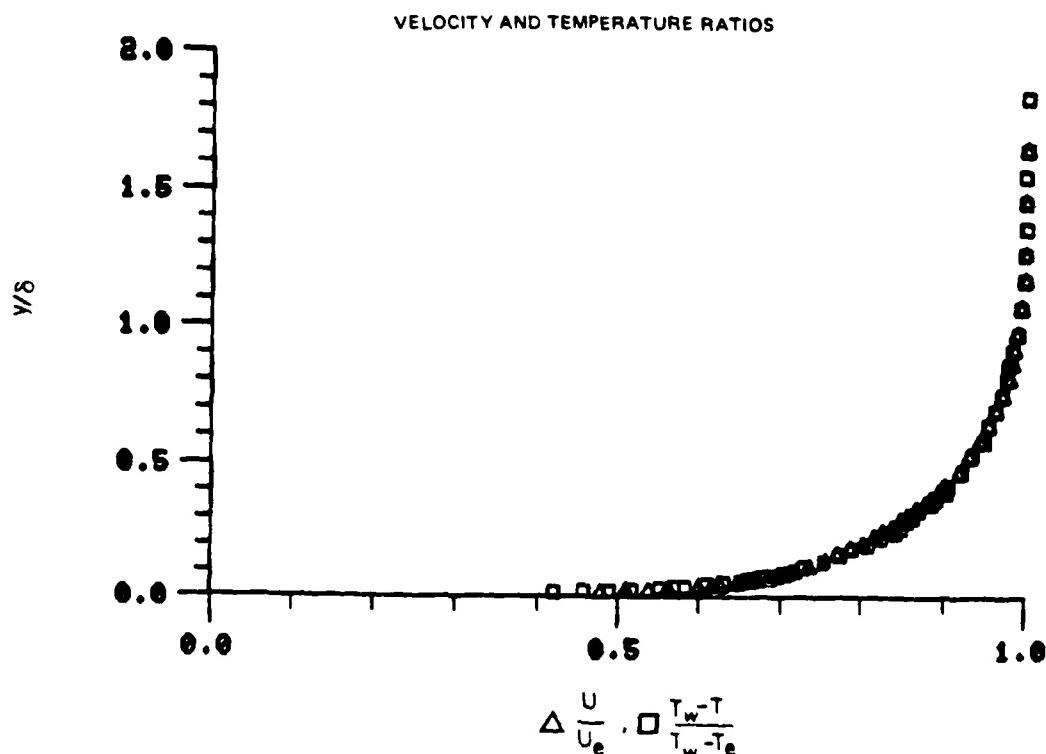


Figure 66. Boundary Layer Velocity and Temperature Profiles
Run No. 9 Point No. 5

78-12-100-1

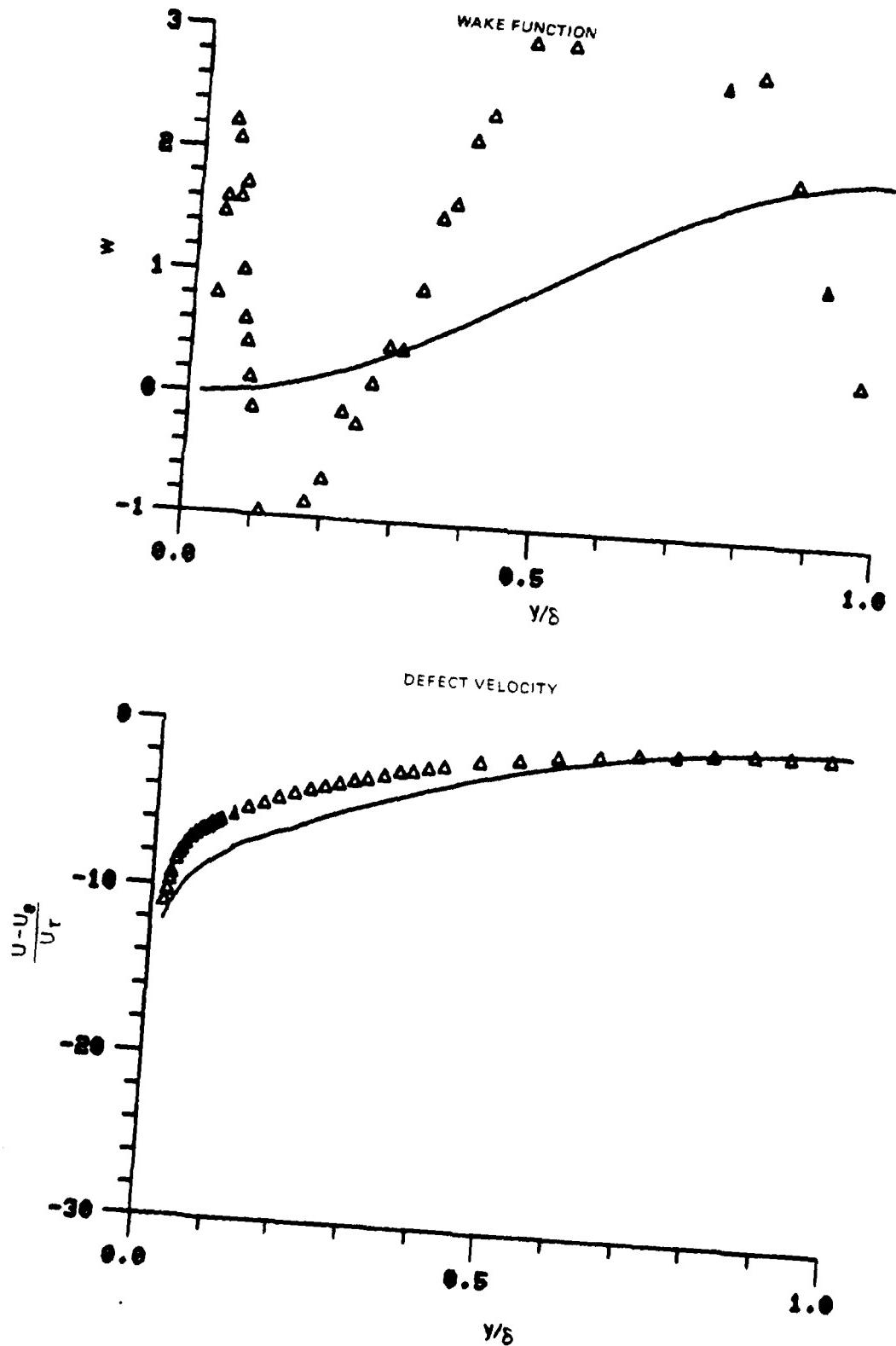


Figure 66. Boundary Layer Velocity Profiles
Run No. 9 Point No. 5

78-12-100-2

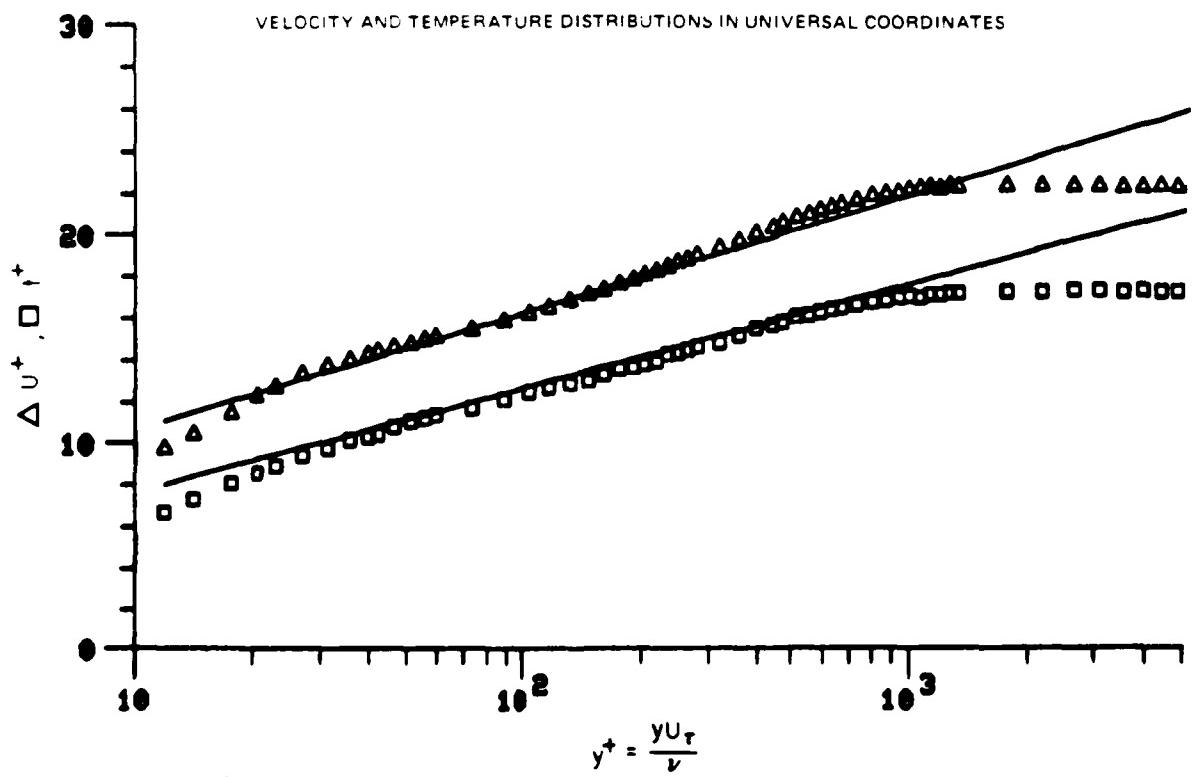
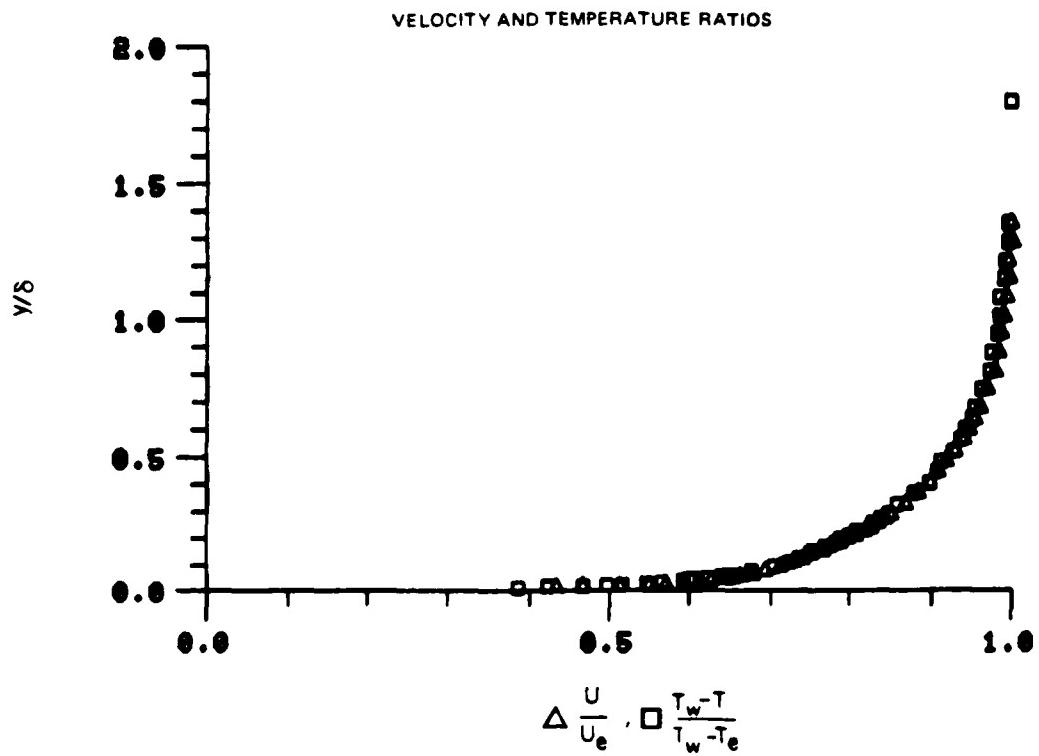


Figure 67. Boundary Layer Velocity and Temperature Profiles
Run No. 9 Point No. 6

78-12-100-1

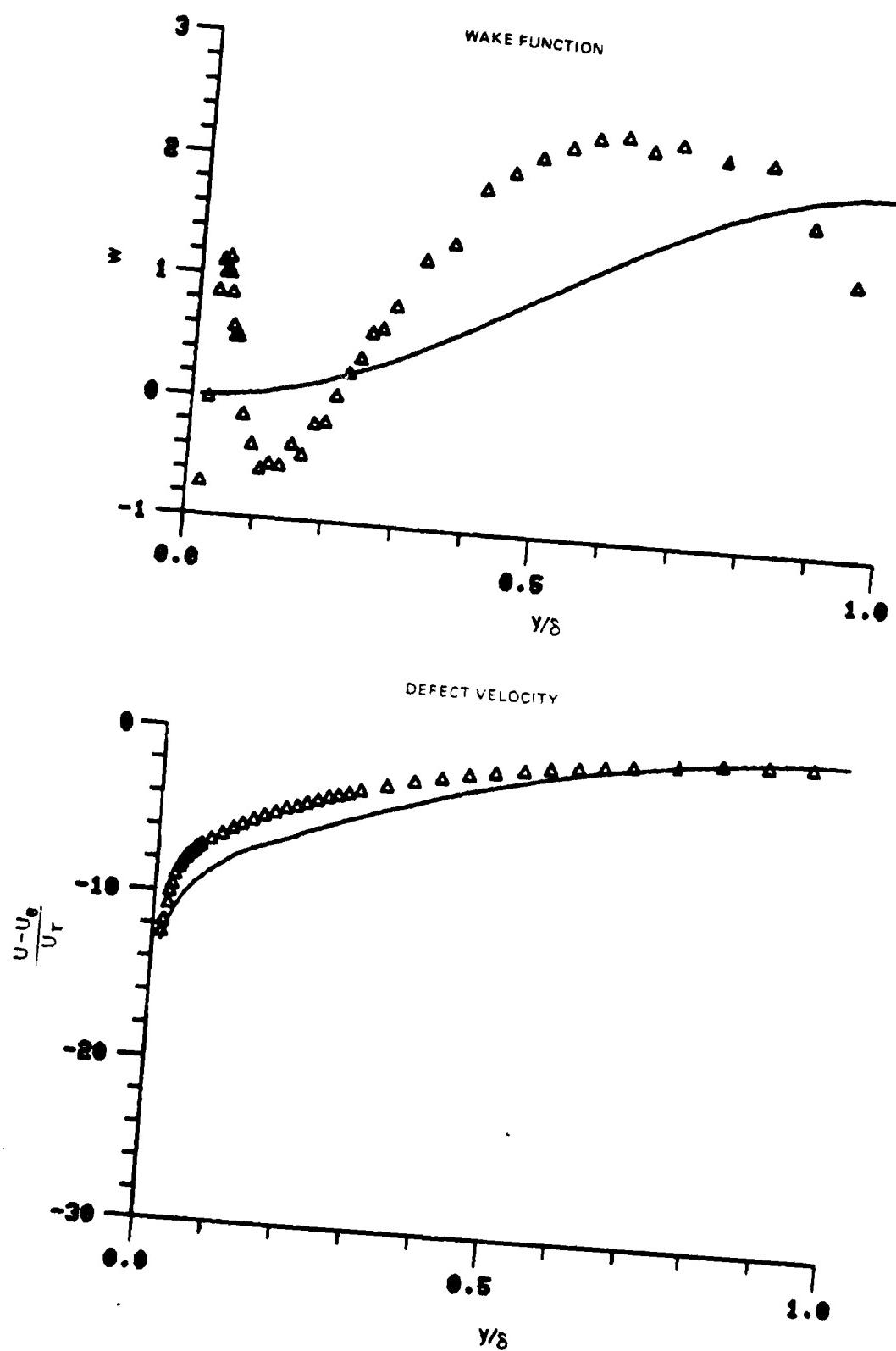


Figure 67. Boundary Layer Velocity Profiles
Run No. 9 Point No. 6

78-12-100-2

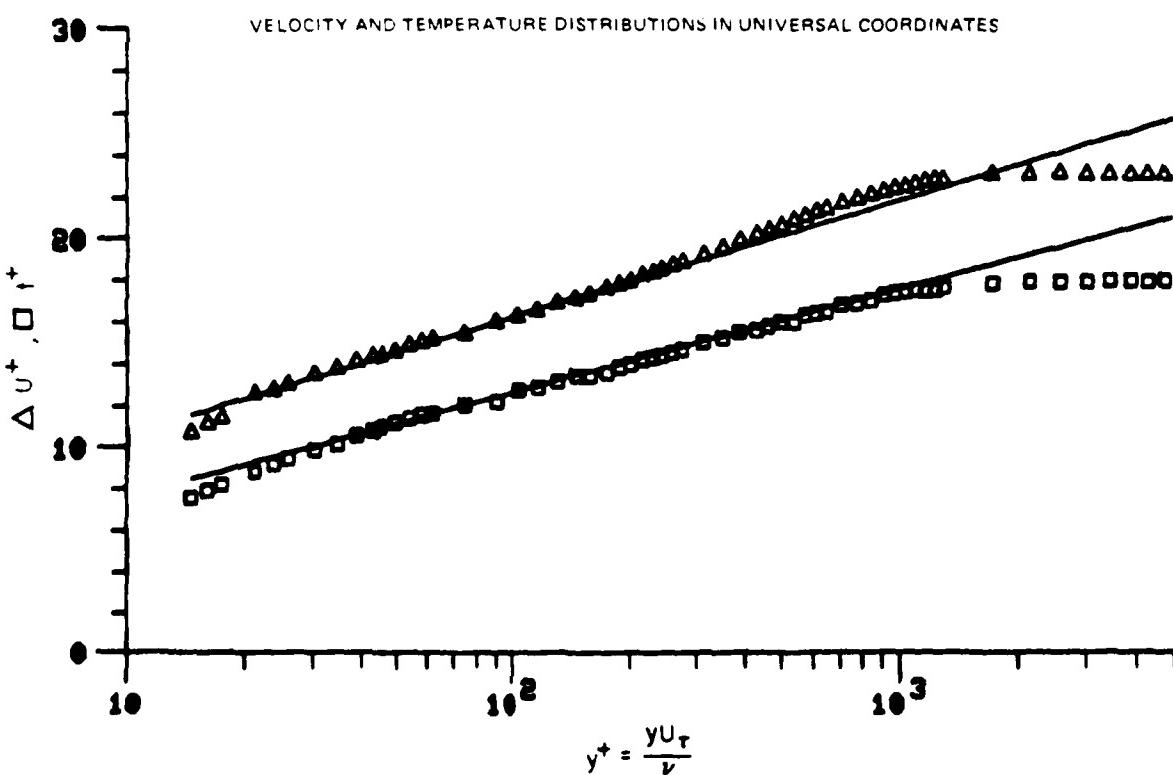
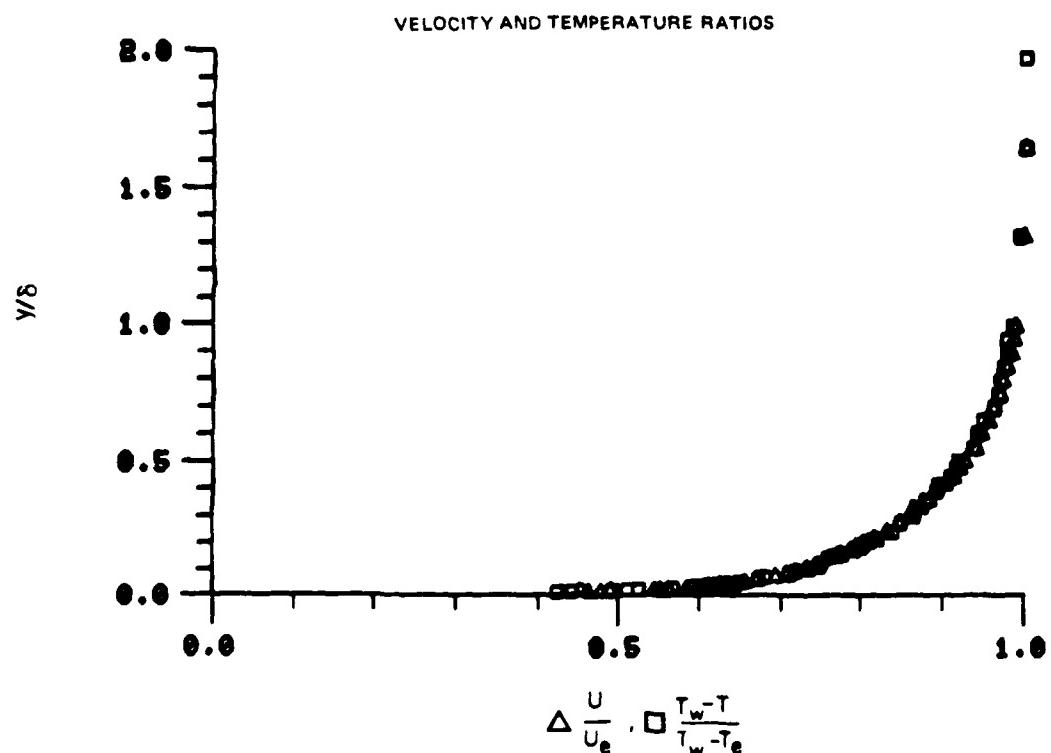


Figure 68. Boundary Layer Velocity and Temperature Profiles
Run No. 9 Point No. 7

78-12-100-1

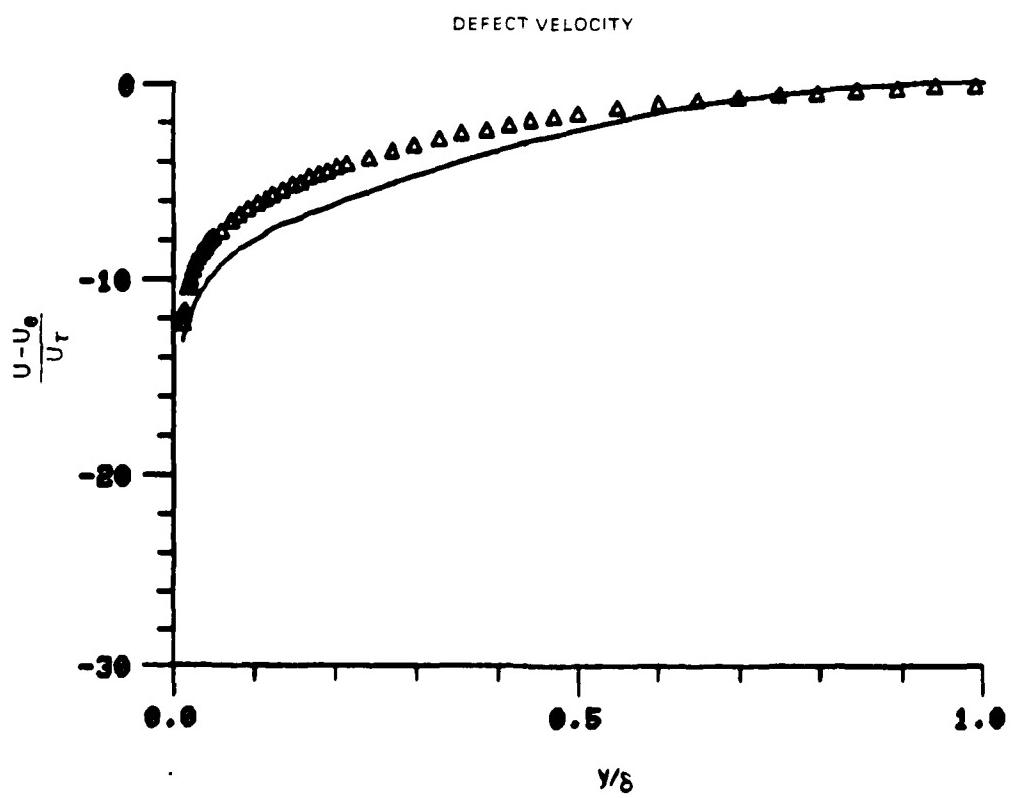
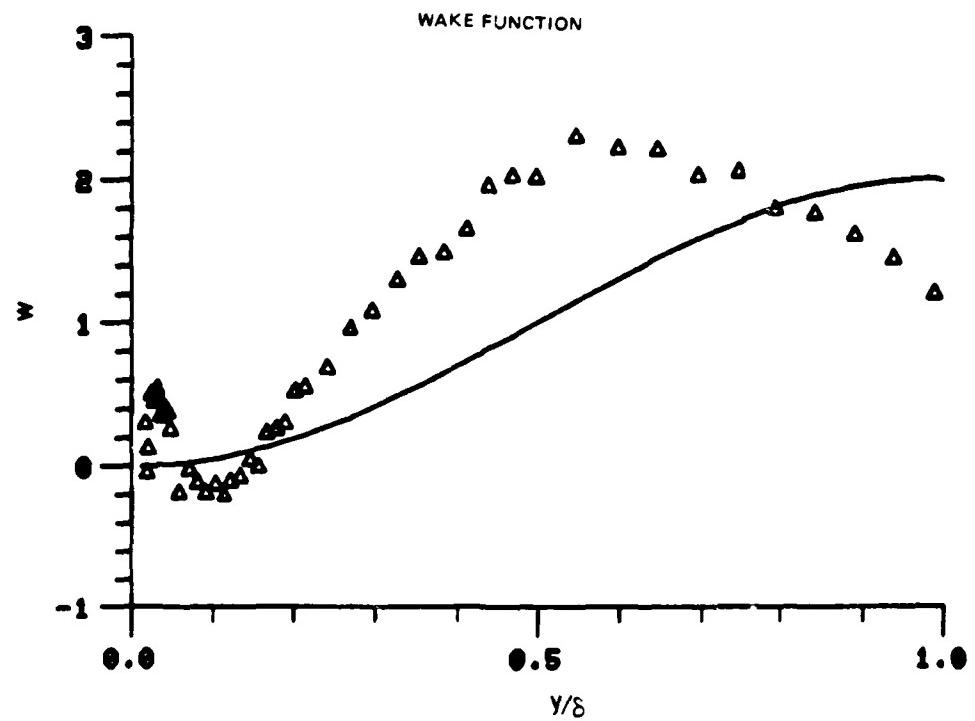
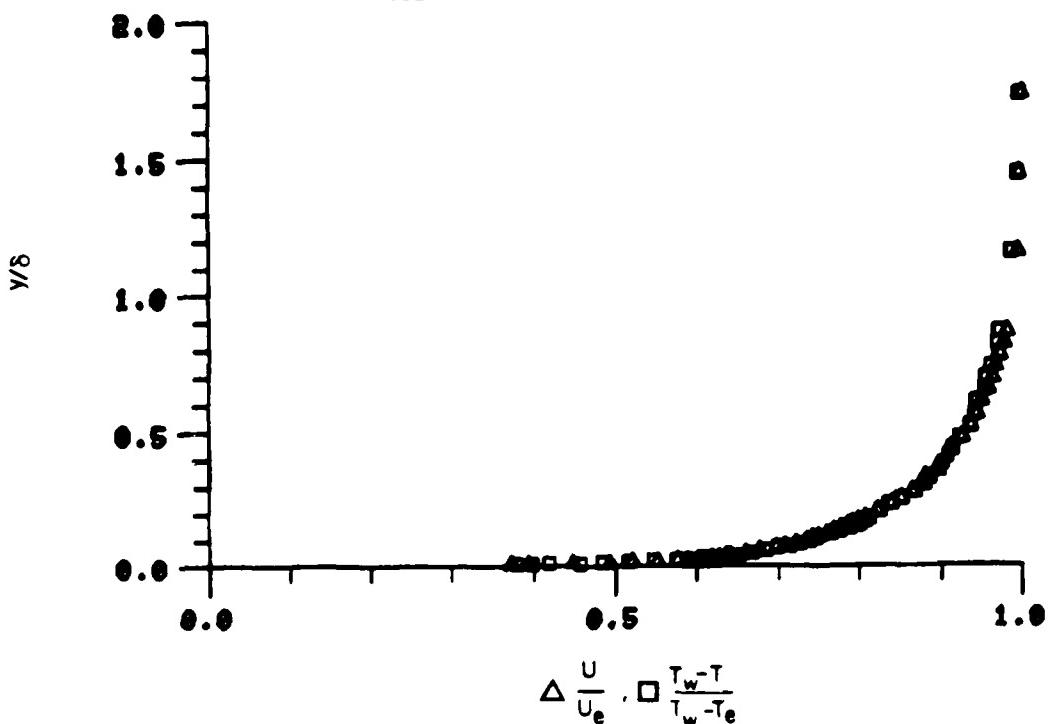


Figure 68. Boundary Layer Velocity Profiles
Run No. 9 Point No. 7

78-12-100-2

VELOCITY AND TEMPERATURE RATIOS



VELOCITY AND TEMPERATURE DISTRIBUTIONS IN UNIVERSAL COORDINATES

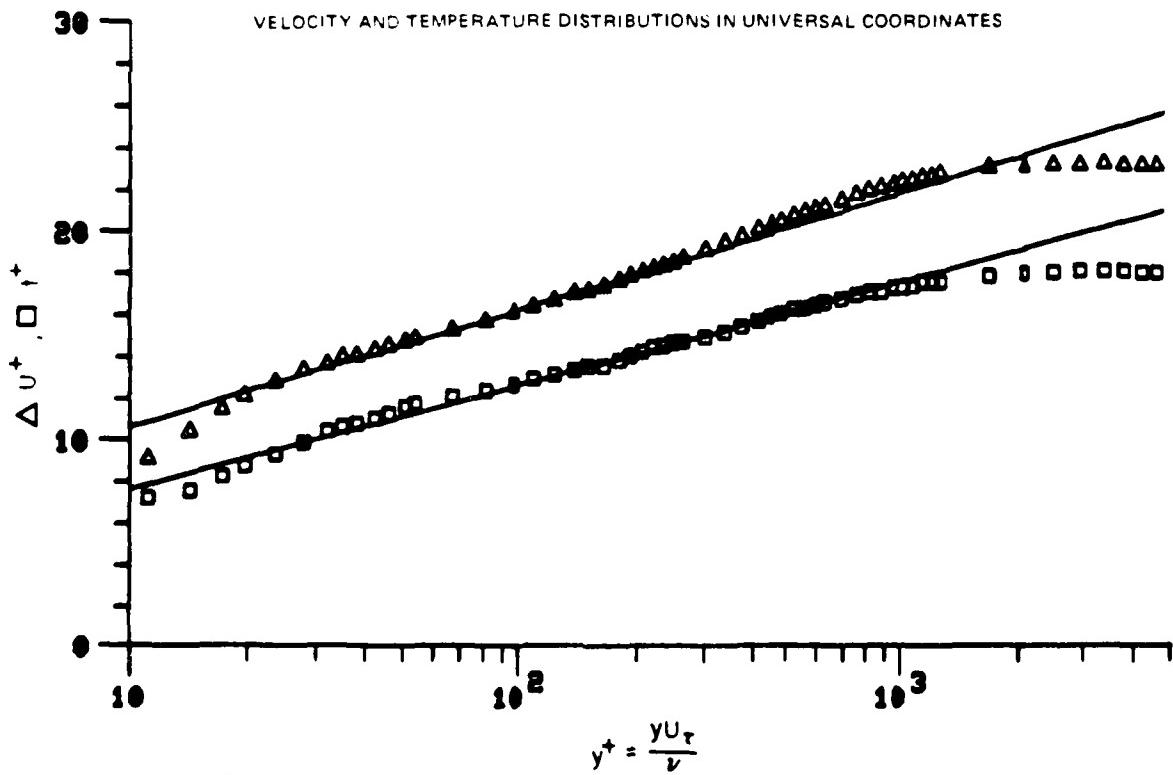


Figure 69. Boundary Layer Velocity and Temperature Profiles
Run No. 9 Point No. 8

78-12-100-1

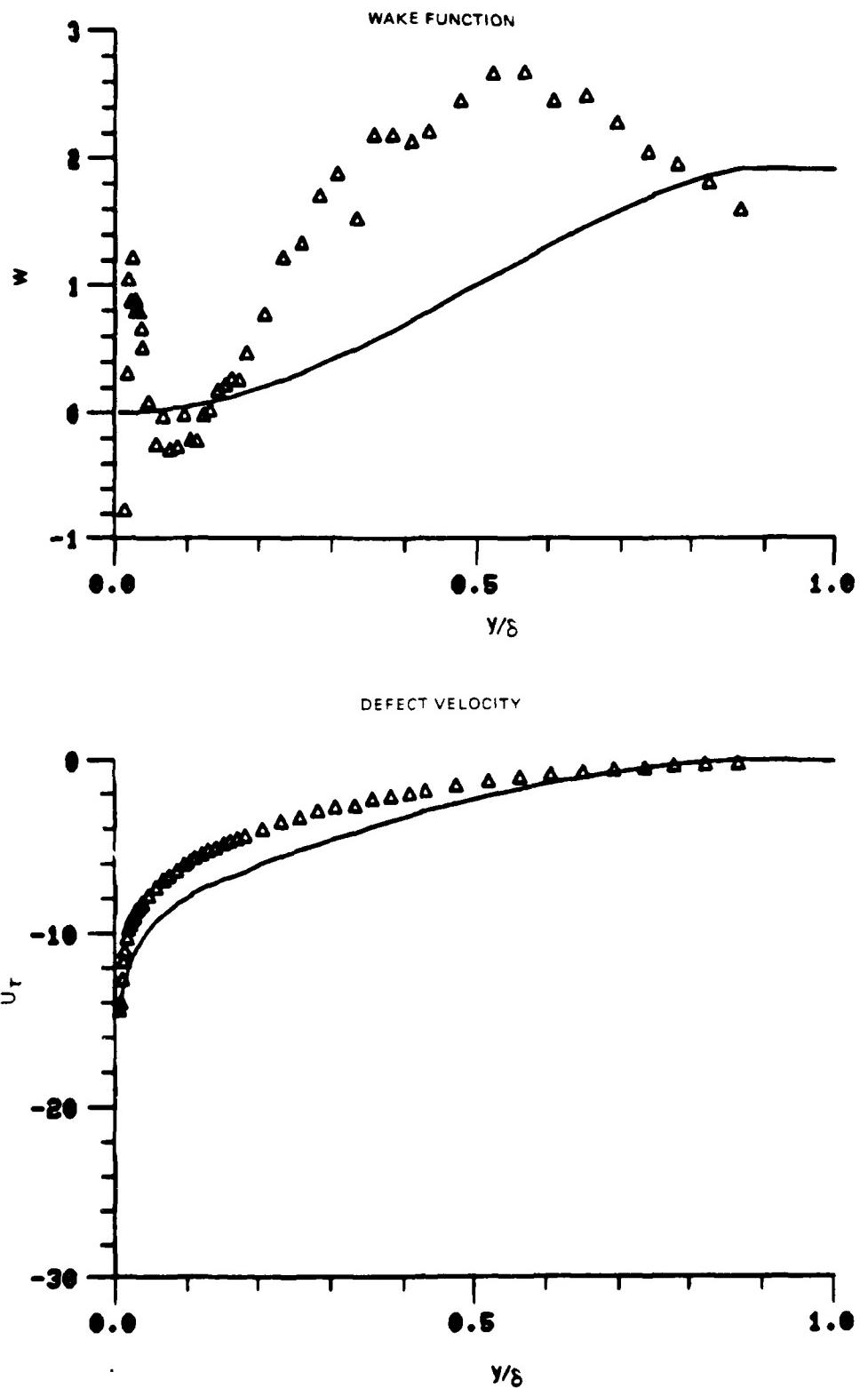


Figure 69. Boundary Layer Velocity Profiles
Run No. 9 Point No. 8

78-12-100-2

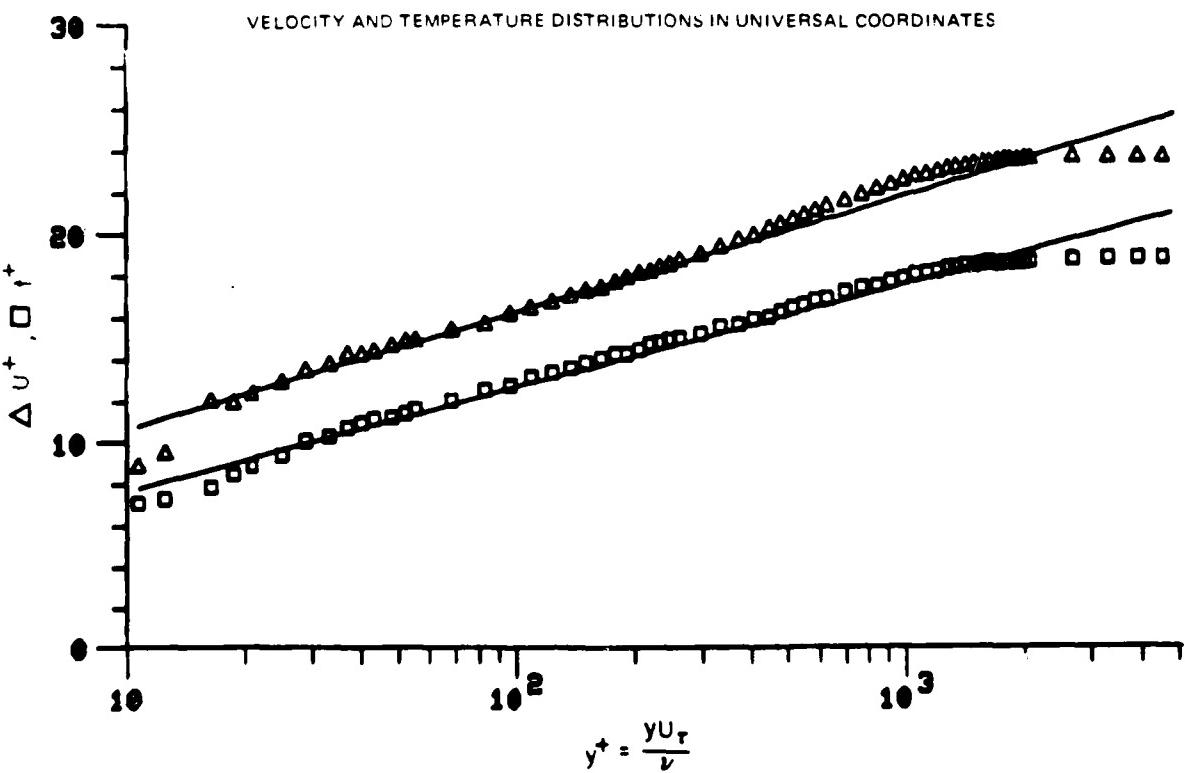
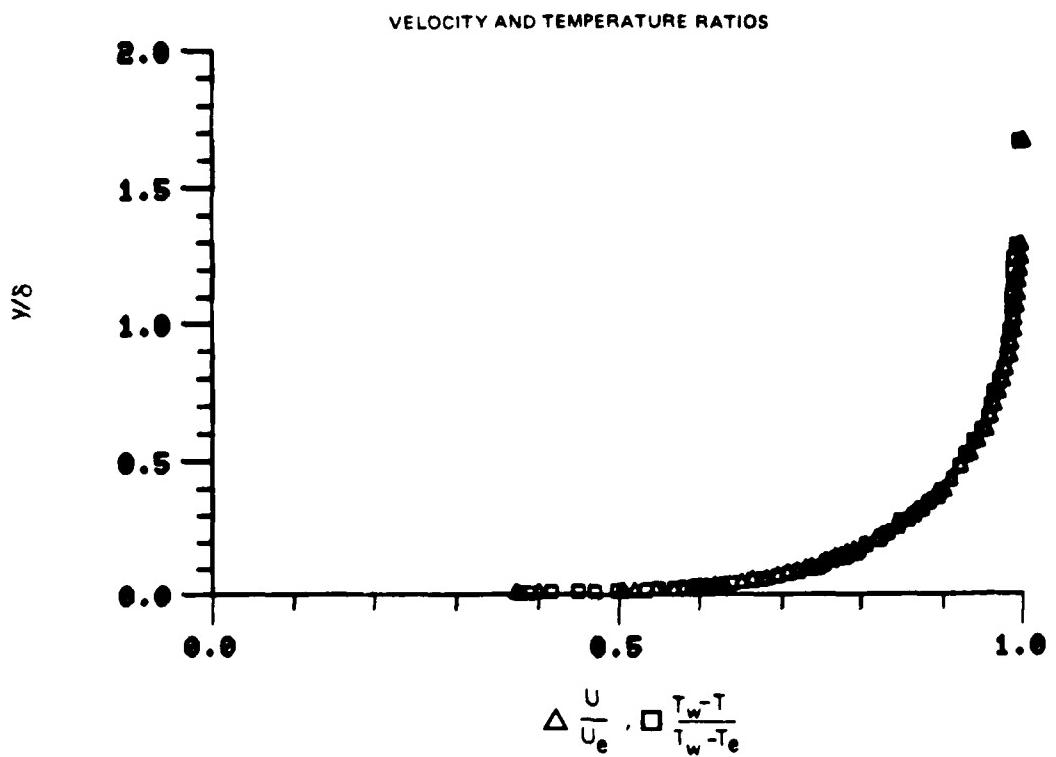


Figure 70. Boundary Layer Velocity and Temperature Profiles
Run No. 9 Point No. 10 78-12-100-1

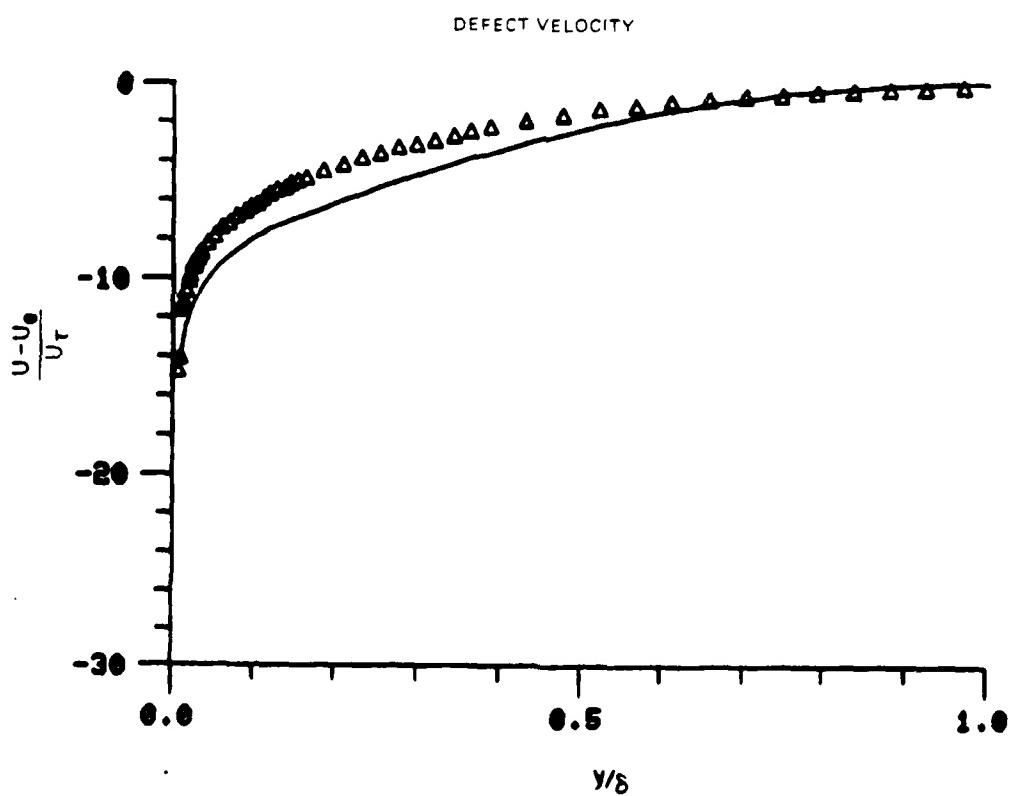
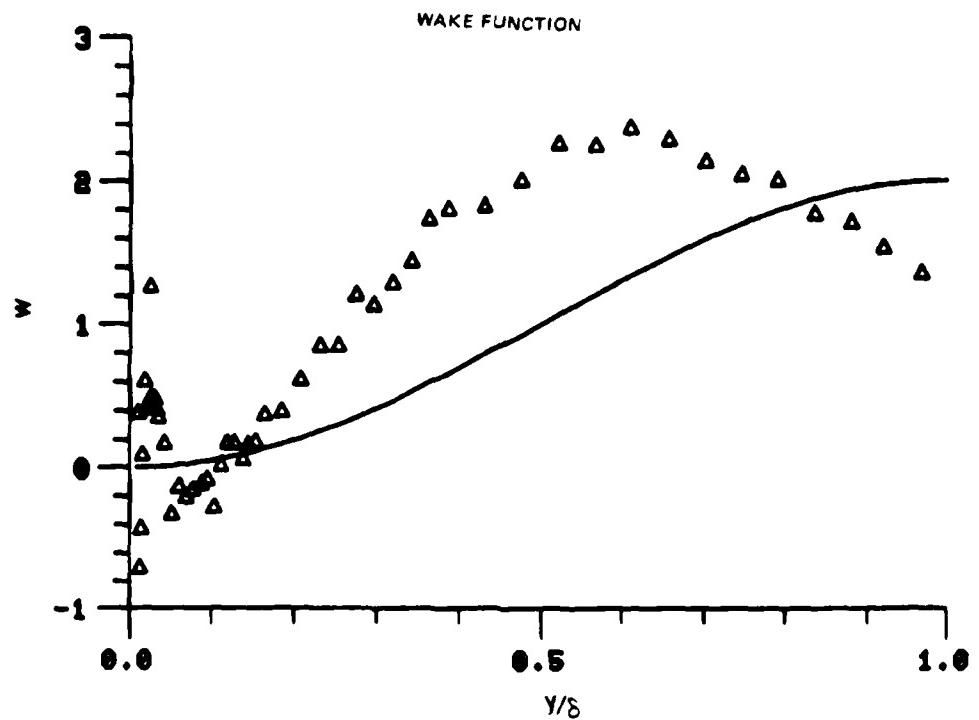


Figure 70. Boundary Layer Velocity Profiles
Run No. 9 Point No. 10

78-12-100-2

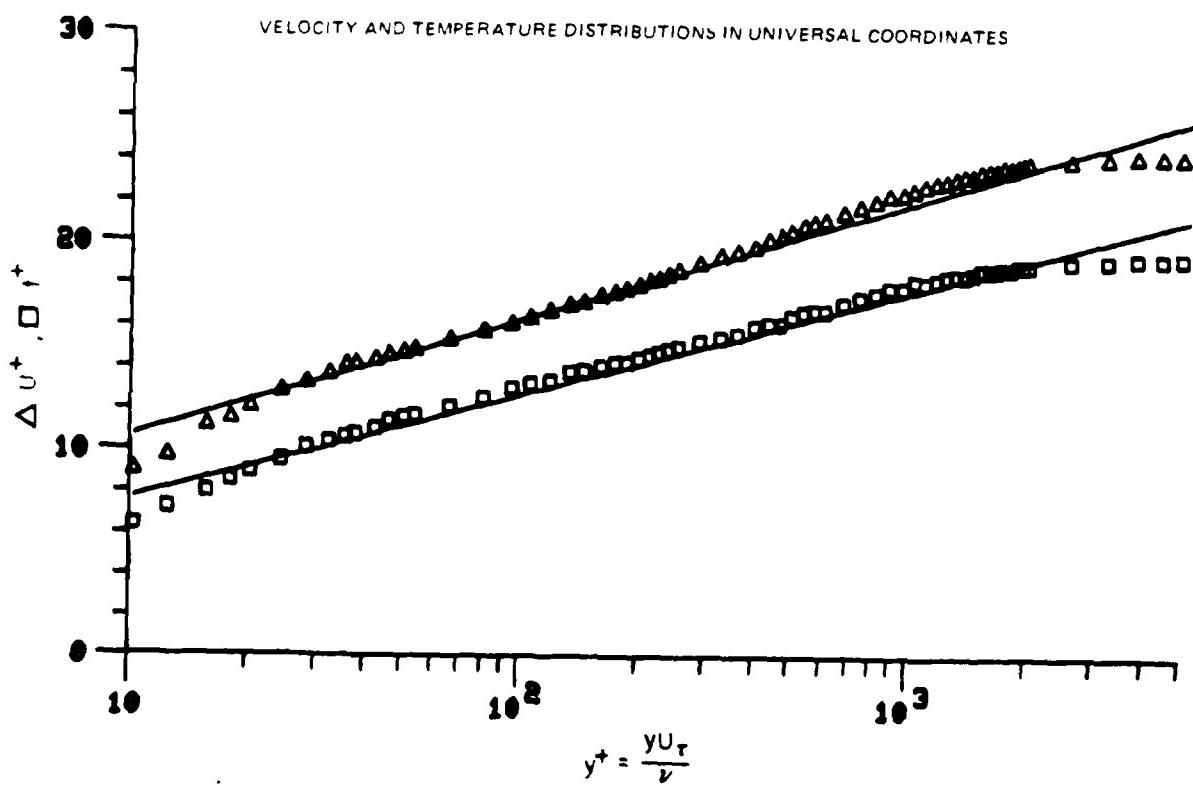
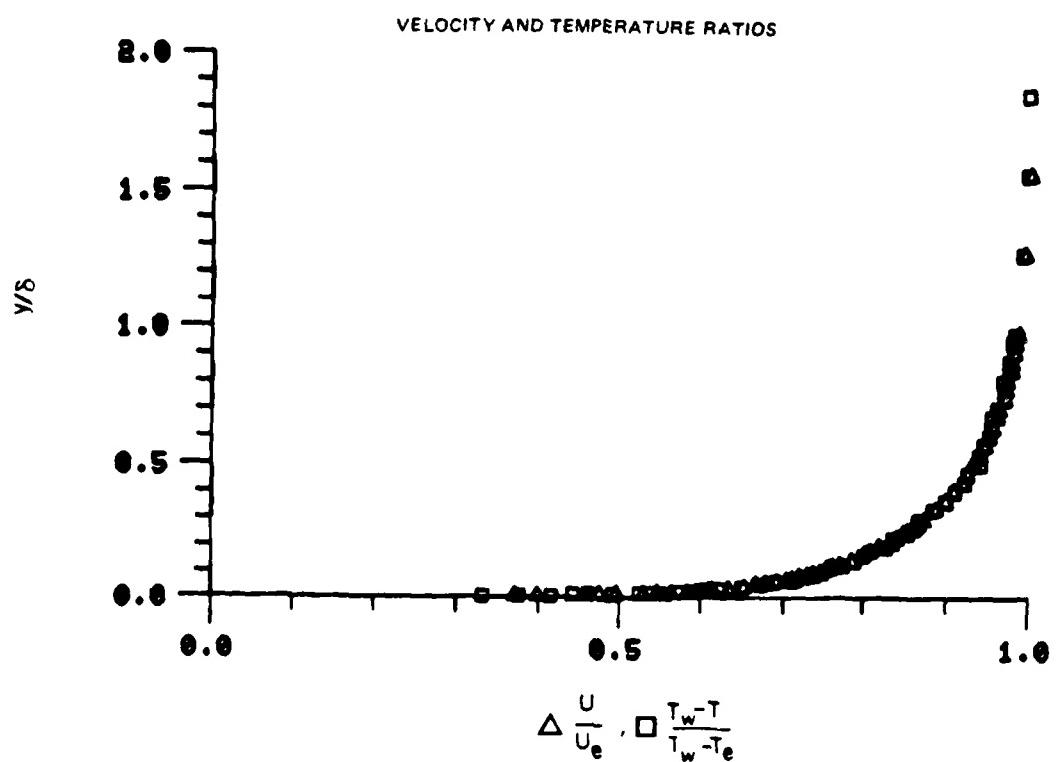


Figure 71. Boundary Layer Velocity and Temperature Profiles
Run No. 9 Point No. 12

78-12-100-1

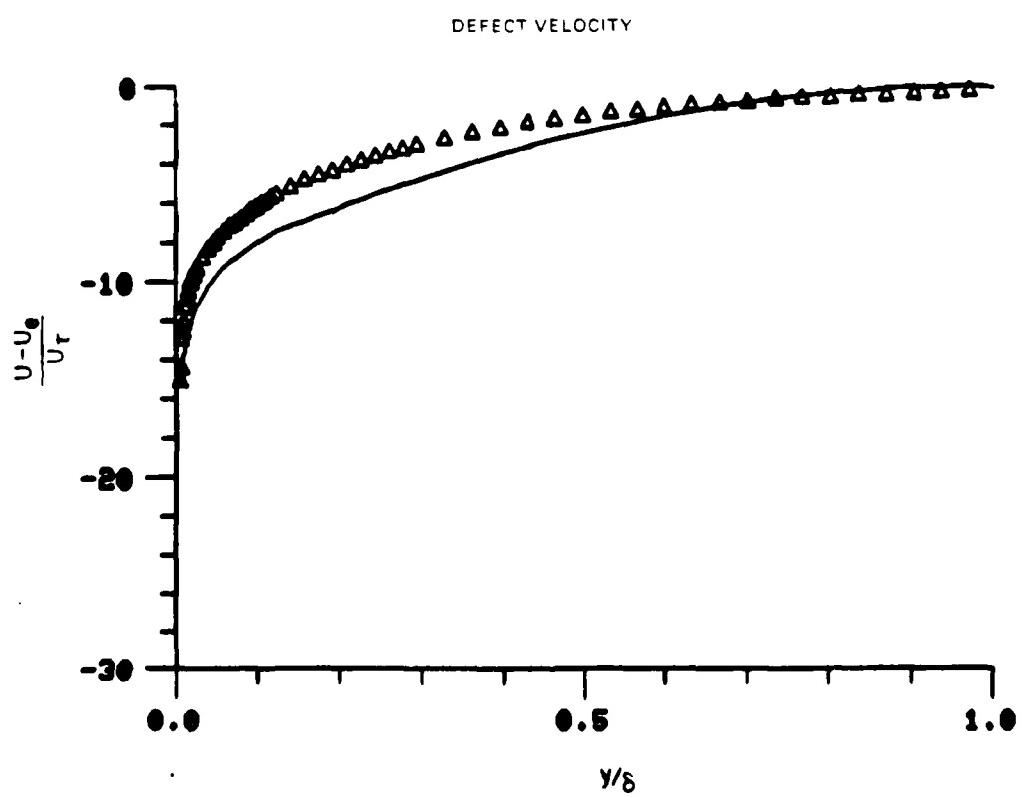
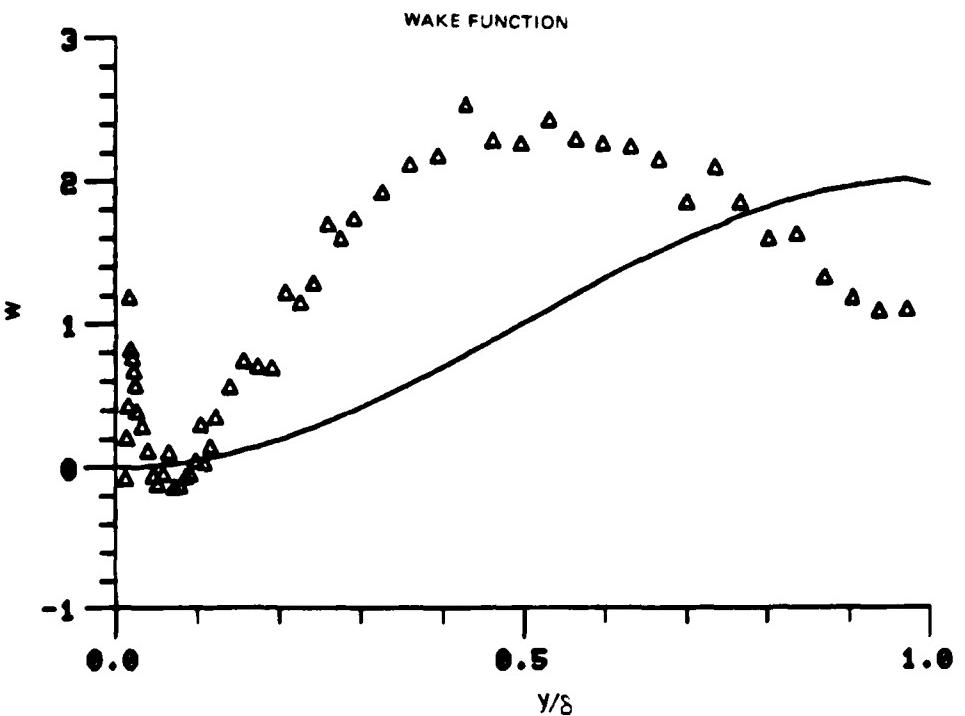


Figure 71. Boundary Layer Velocity Profiles
Run No. 9 Point No. 12

7-12-100-2

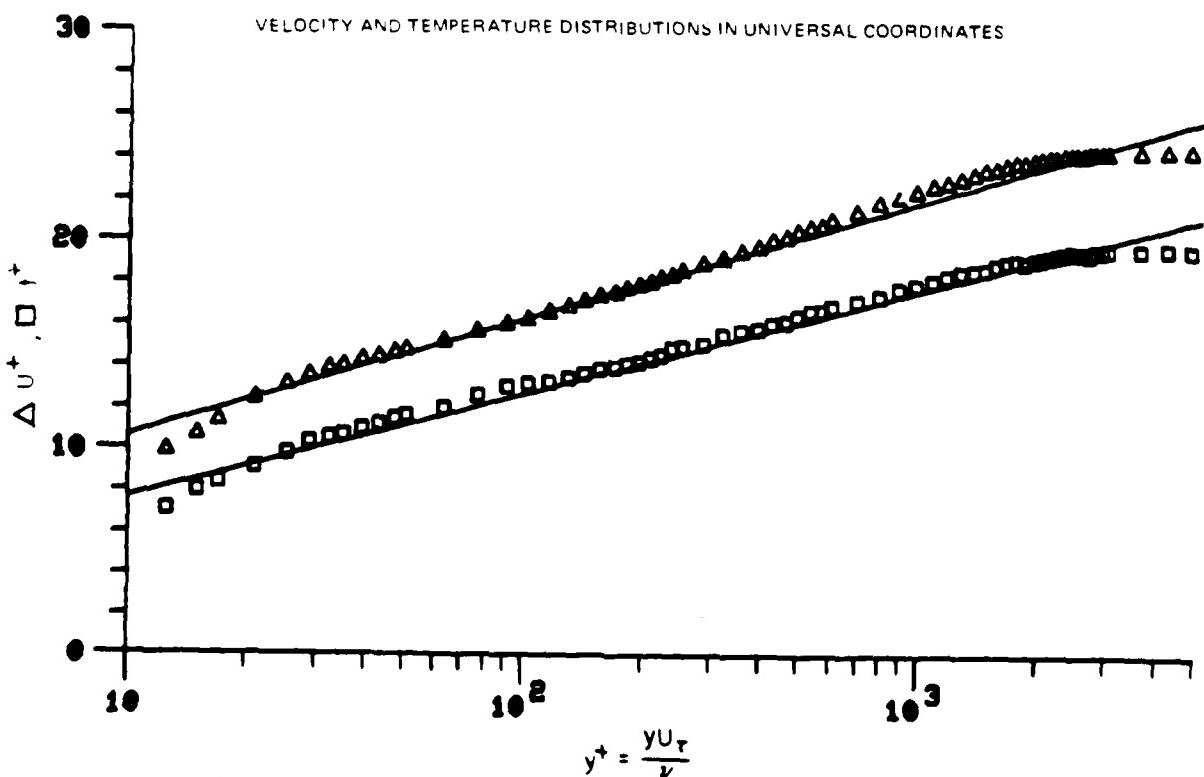
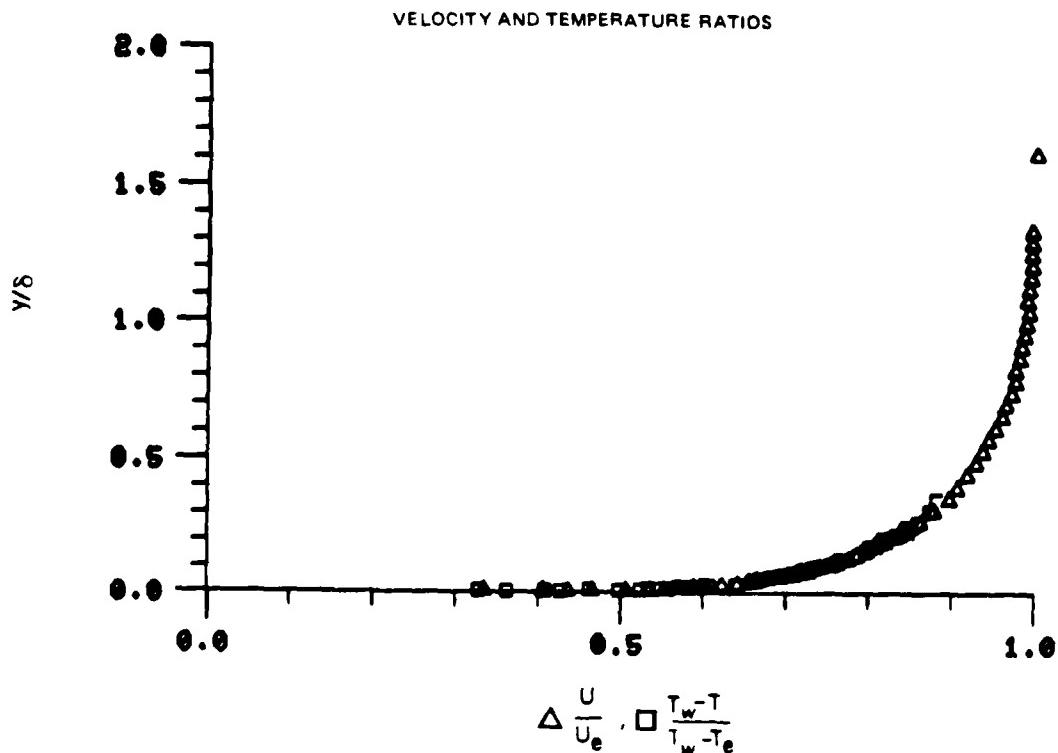


Figure 72. Boundary Layer Velocity and Temperature Profiles
Run No. 9 Point No. 14

78-12-100-1

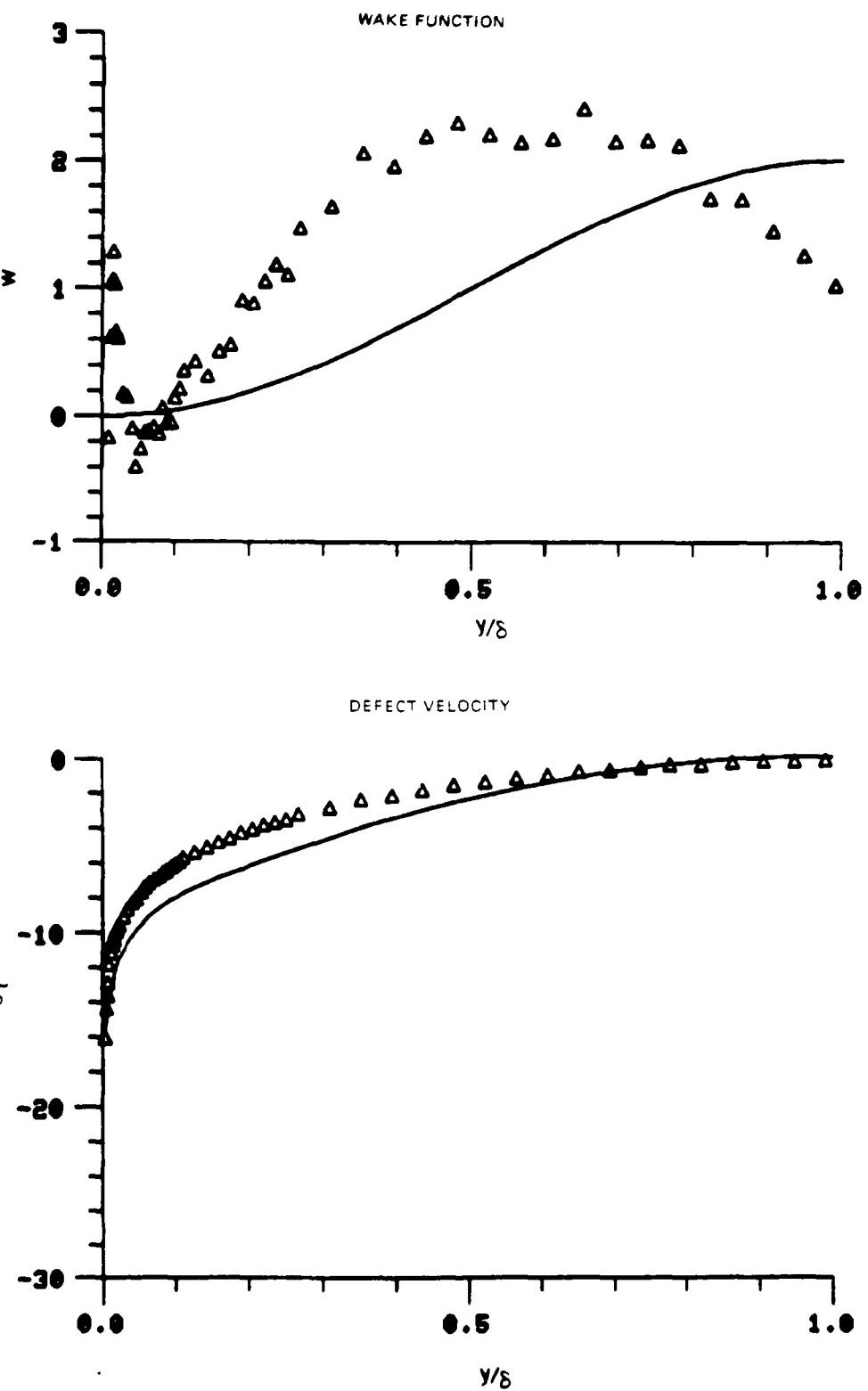


Figure 72. Boundary Layer Velocity Profiles
Run No. 9 Point No. 14

78-12-100-2

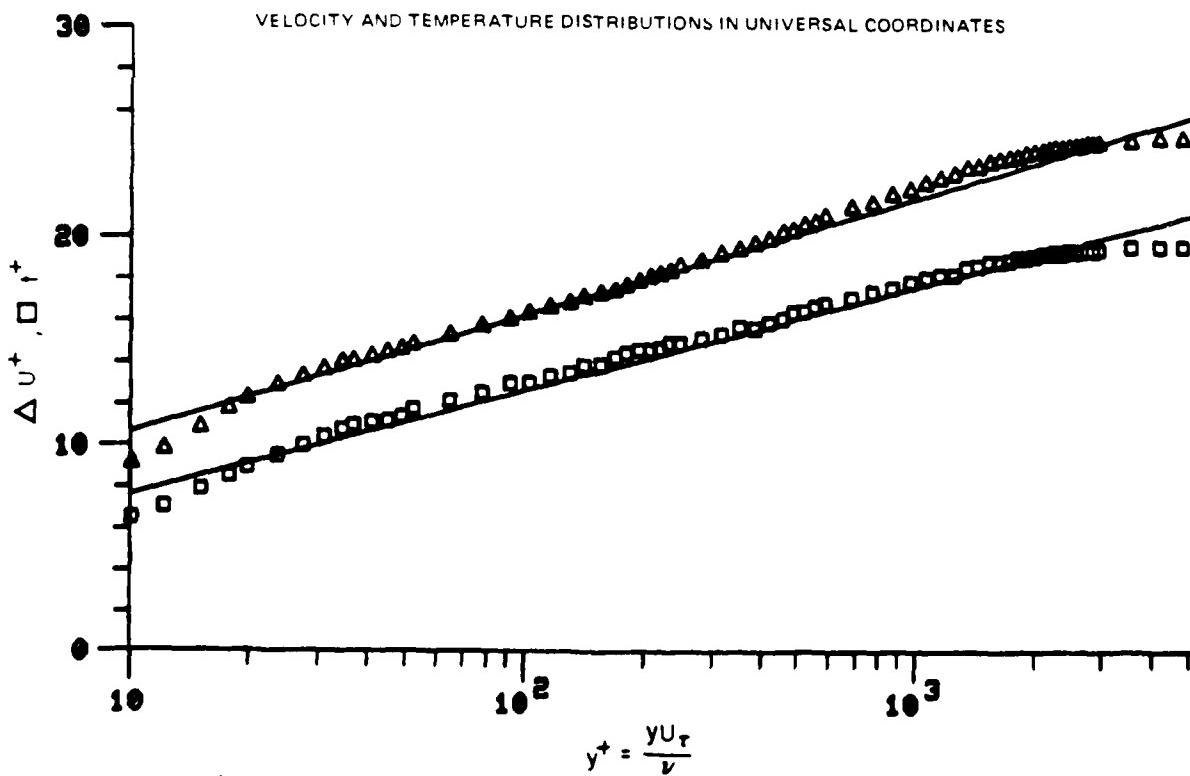
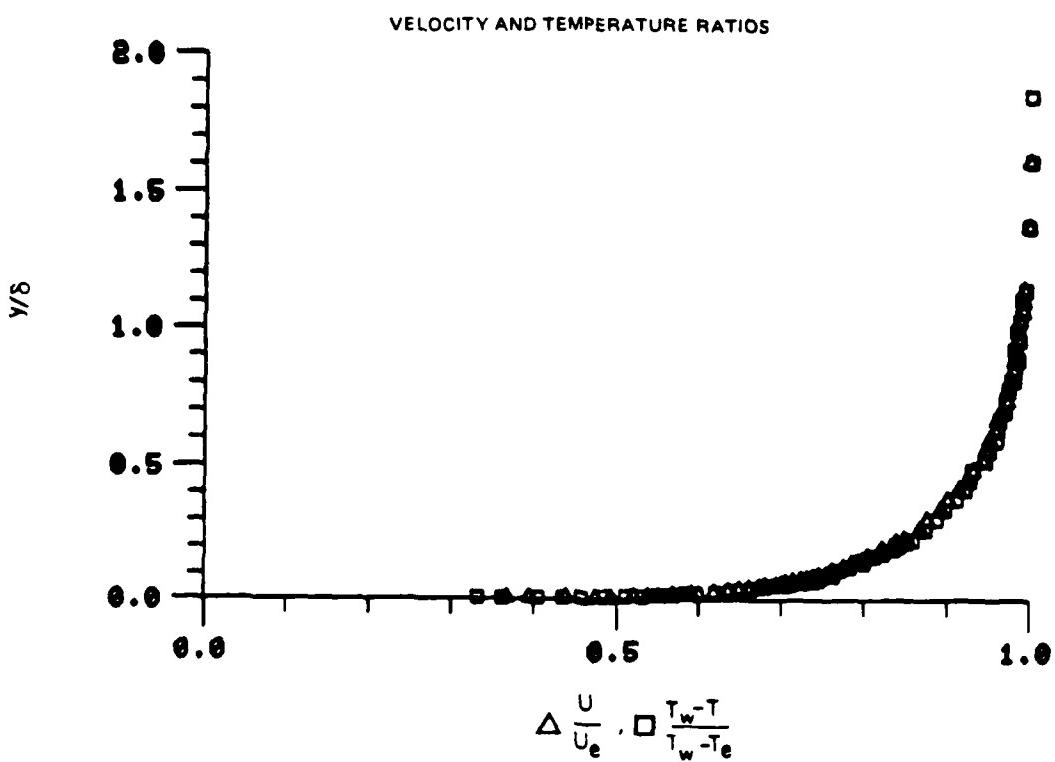


Figure 73. Boundary Layer Velocity and Temperature Profiles

Run No. 9 Point No. 16

78-12-100-1

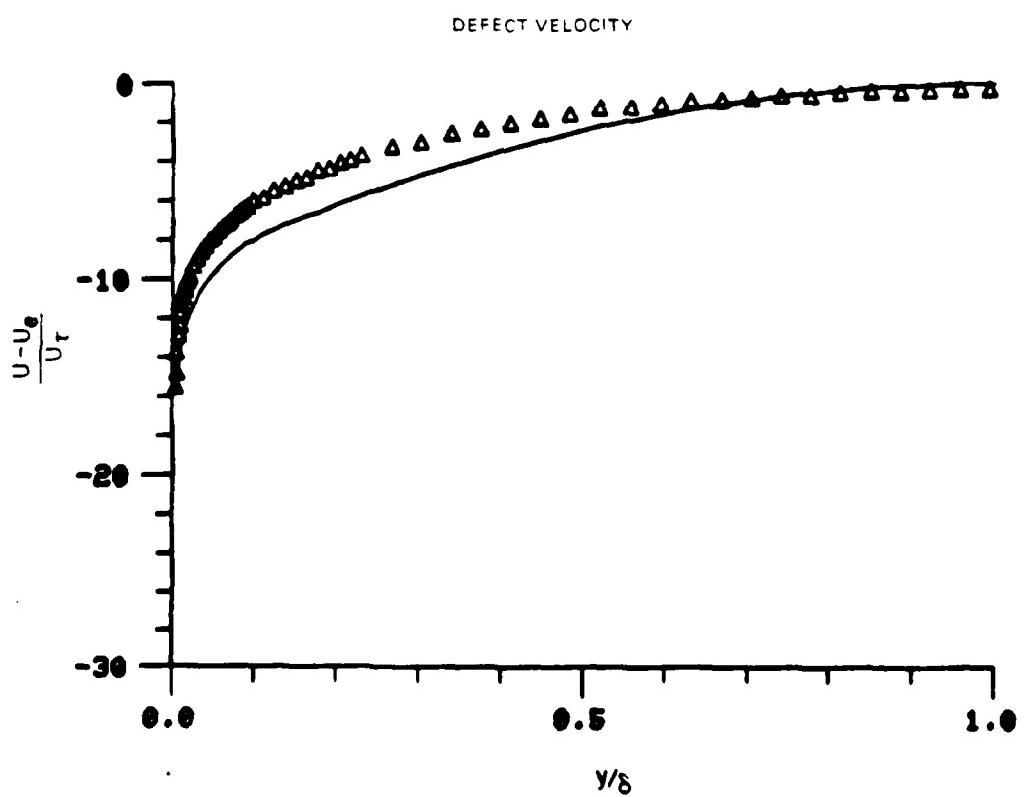
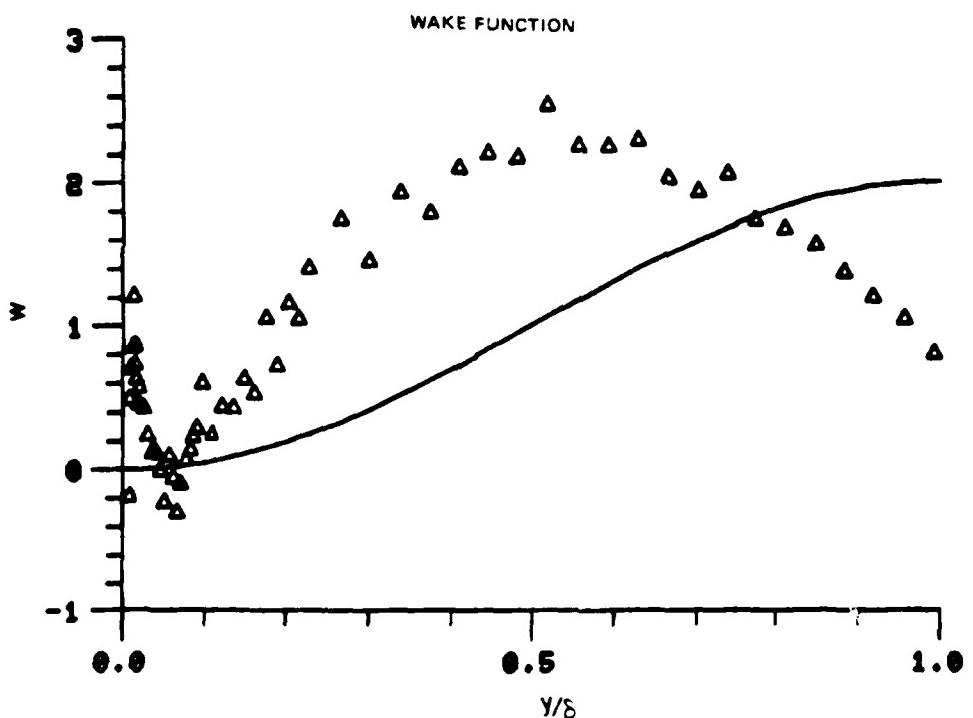


Figure 73. Boundary Layer Velocity Profiles
Run No. 9 Point No. 16

78-12-100-2

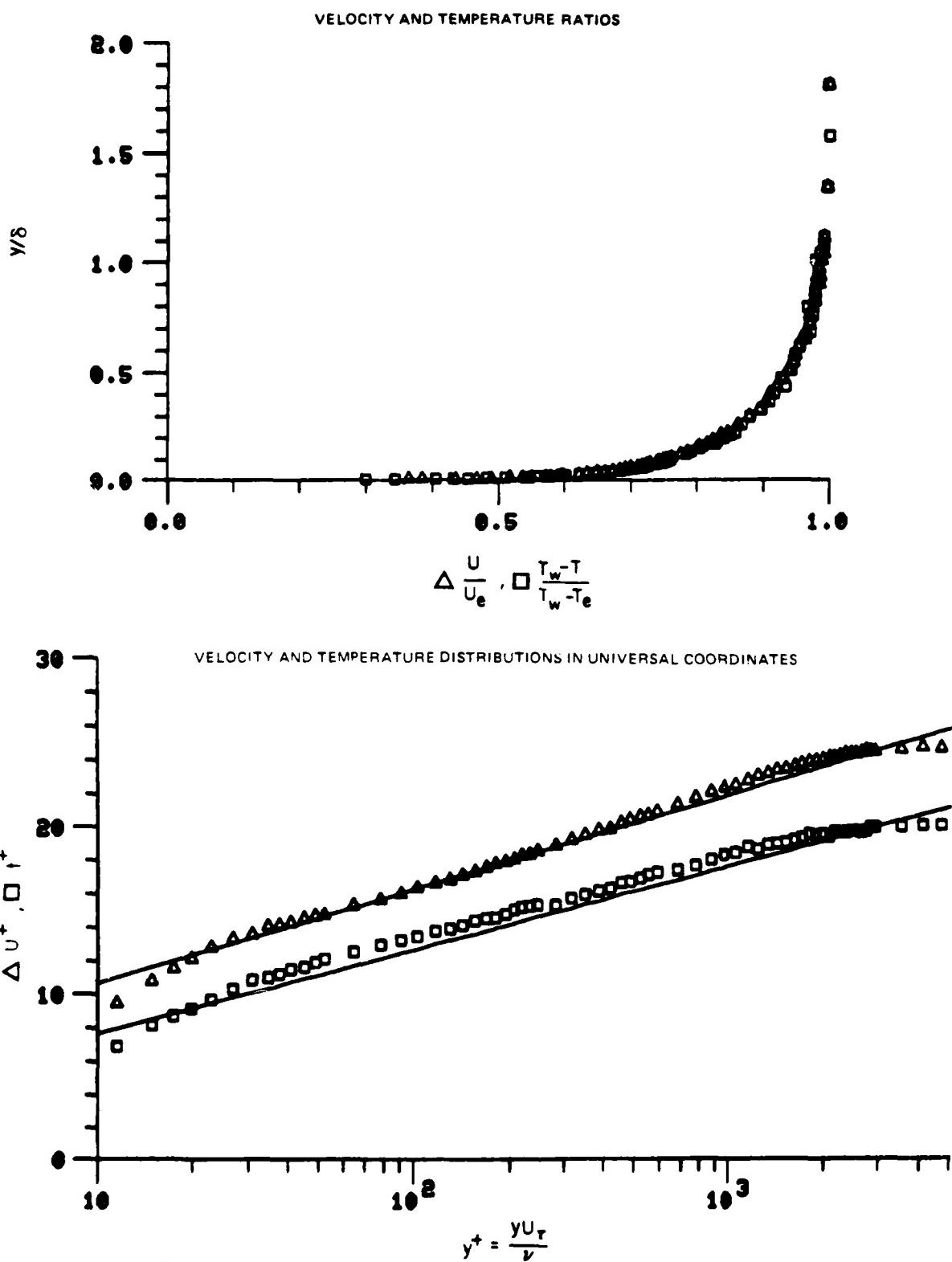


Figure 74. Boundary Layer Velocity and Temperature Profiles
Run No. 9 Point No. 17

78-12-100-1

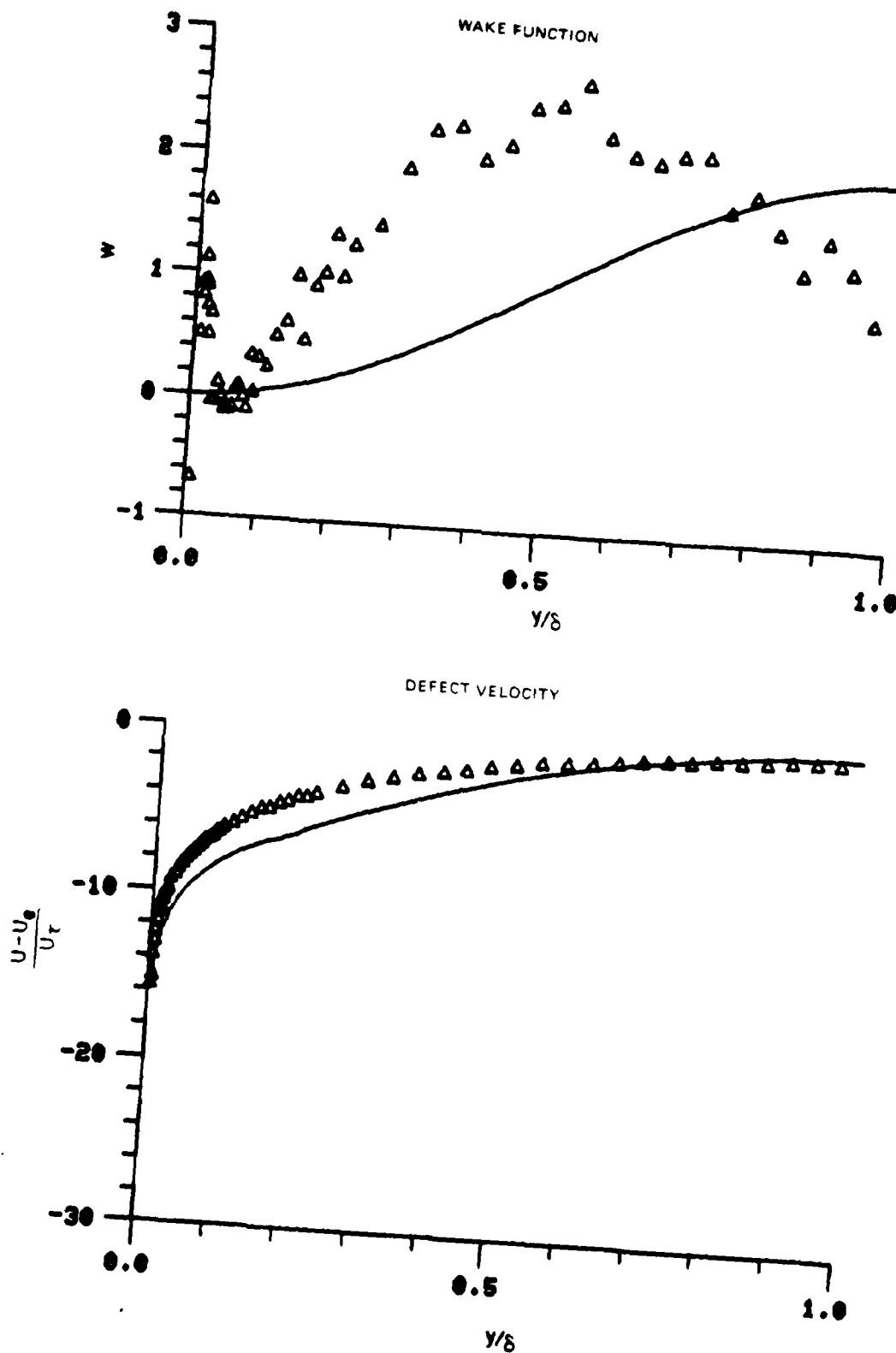


Figure 74. Boundary Layer Velocity Profiles
Run No. 9 Point No. 17

78-12-100-2

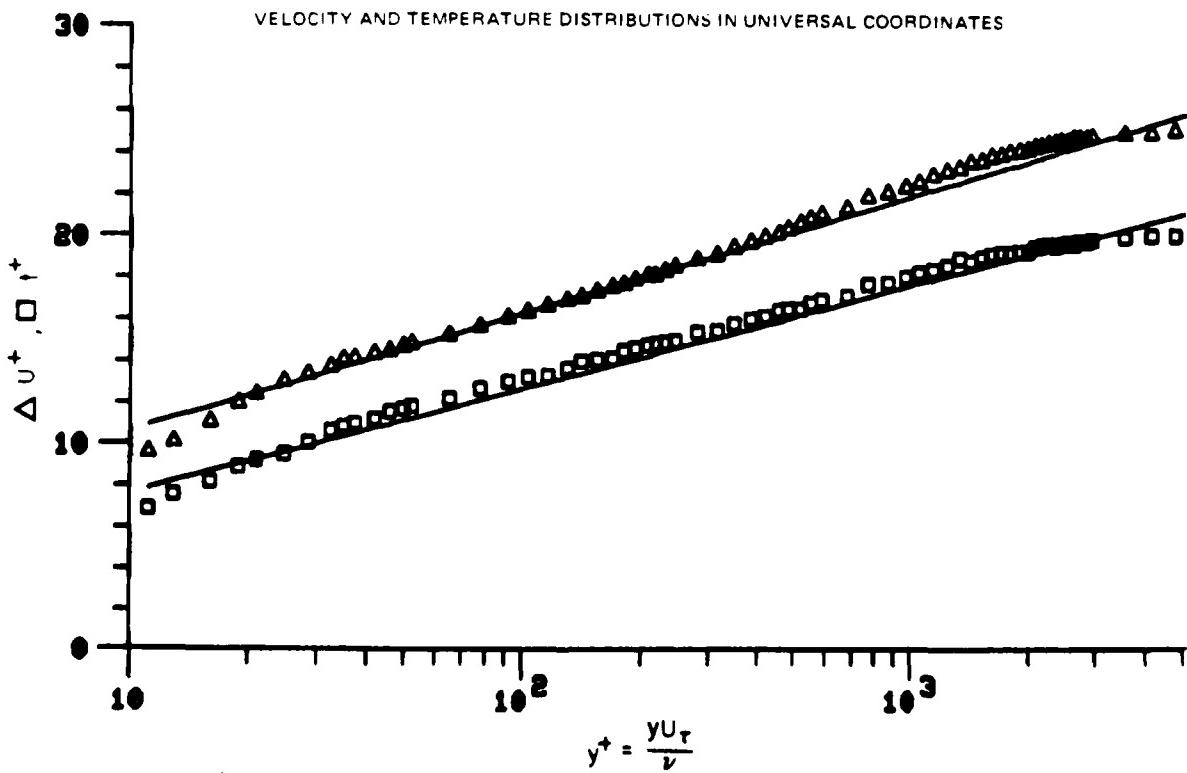
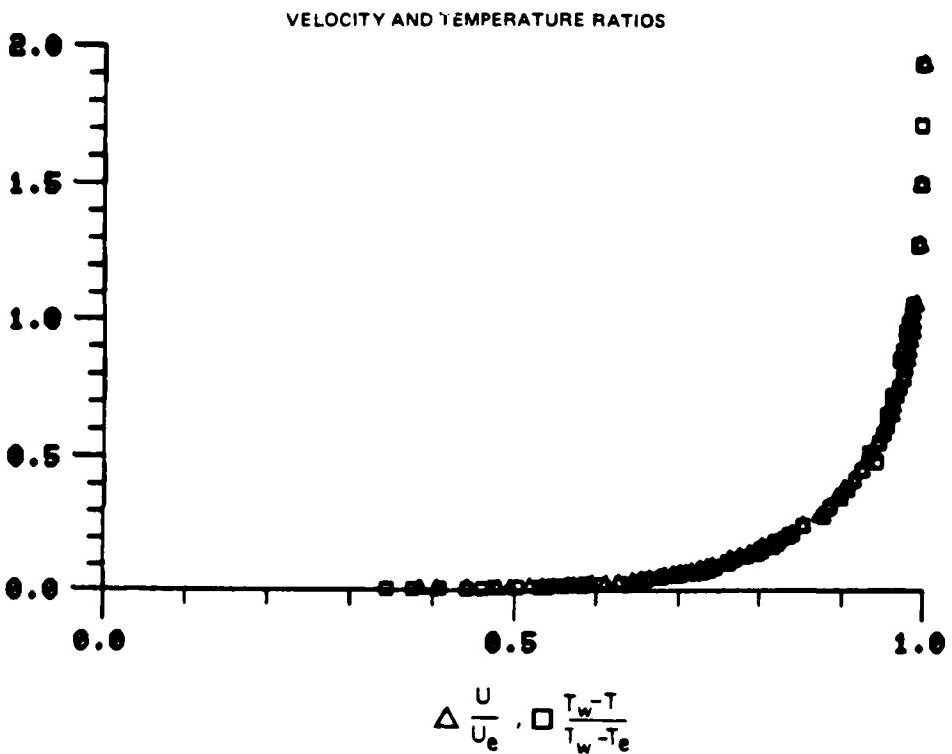


Figure 75. Boundary Layer Velocity and Temperature Profiles
Run No. 9 Point No. 18

78-12-100-1

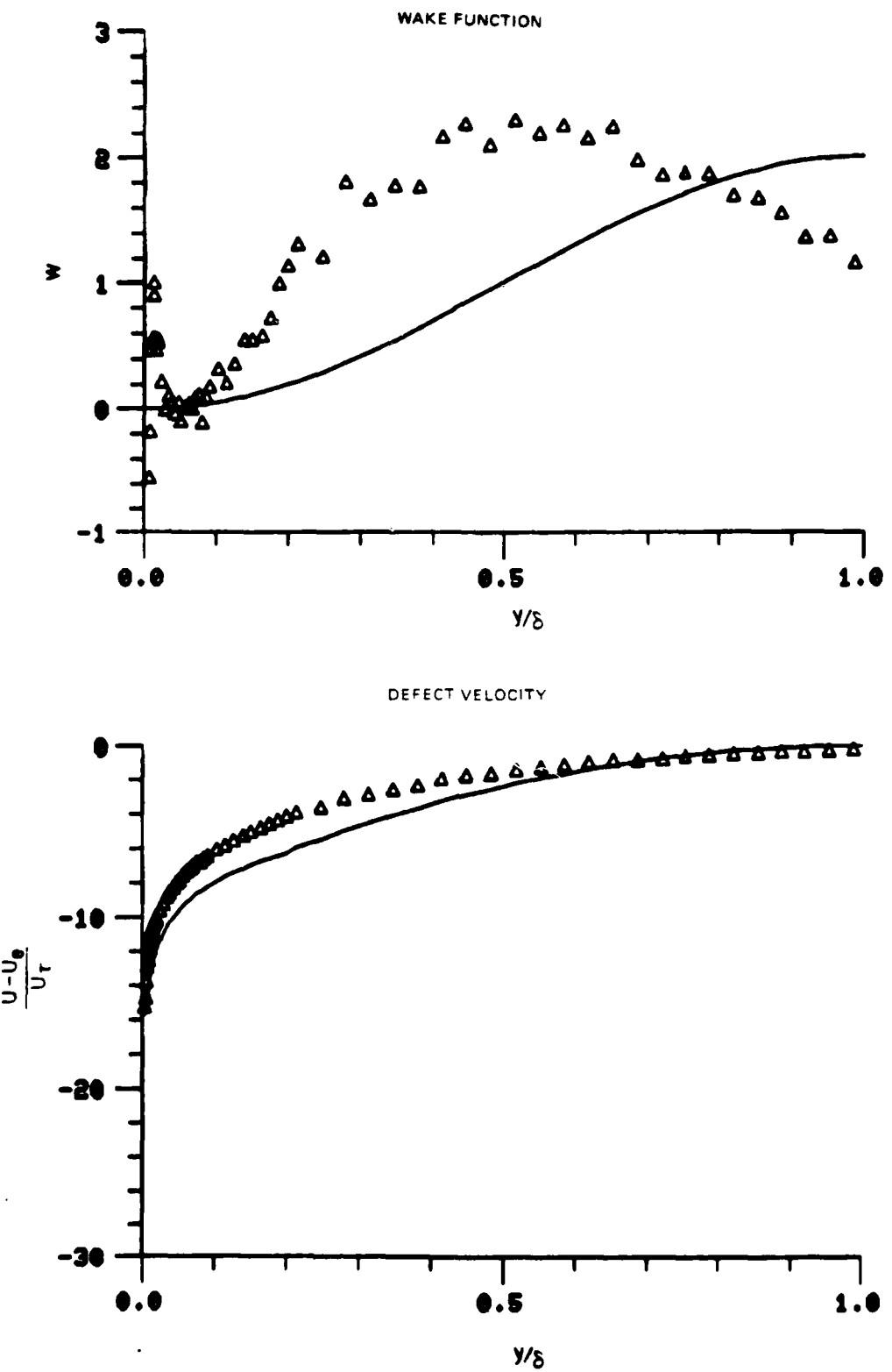


Figure 75. Boundary Layer Velocity Profiles
Run No. 9 Point No. 18

78-12-100-2

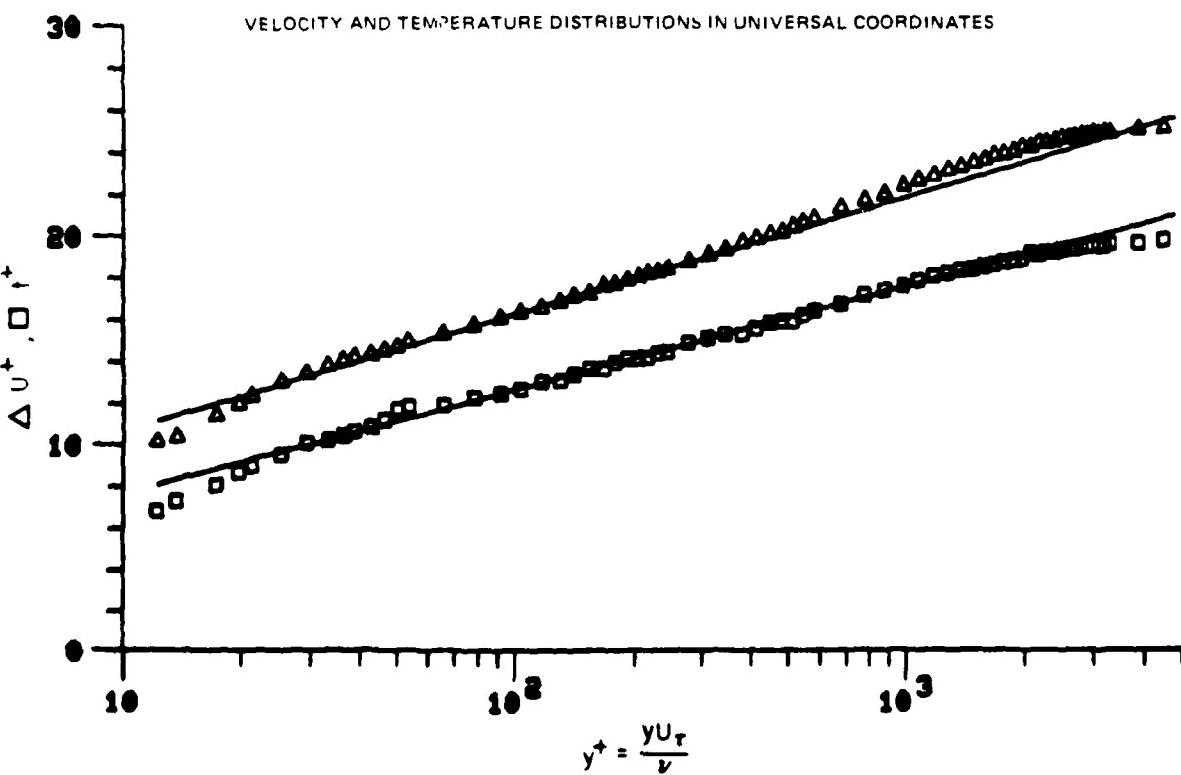
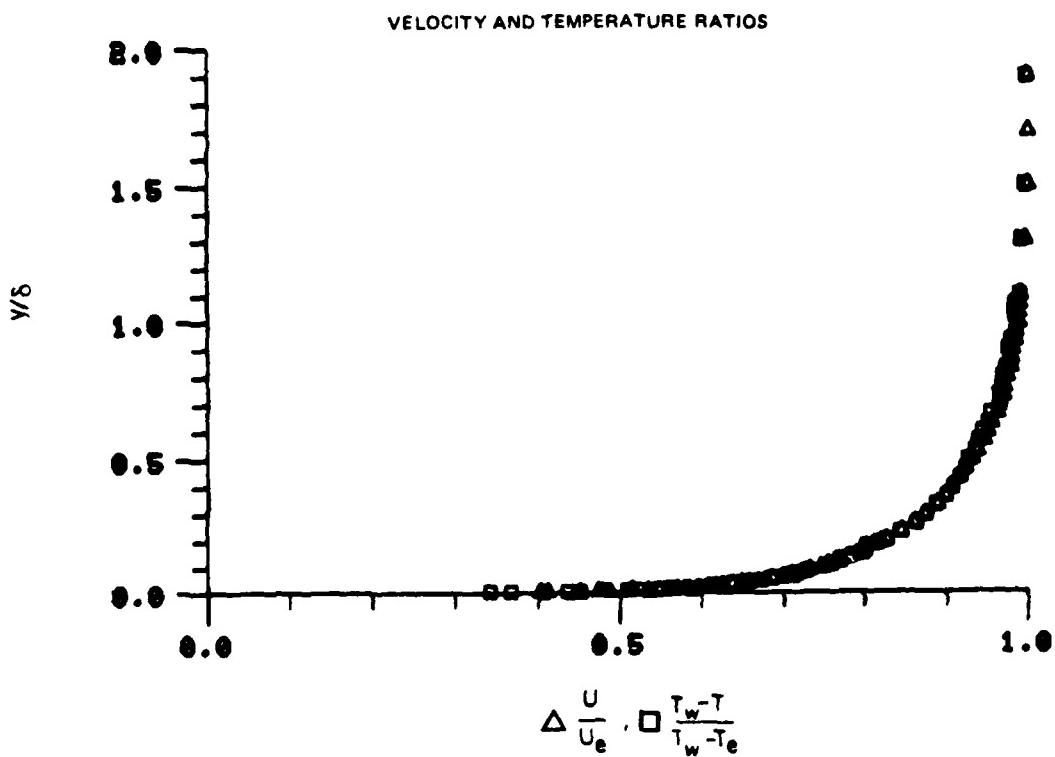


Figure 76. Boundary Layer Velocity and Temperature Profiles
Run No. 9 Point No. 19

78-12-100-1

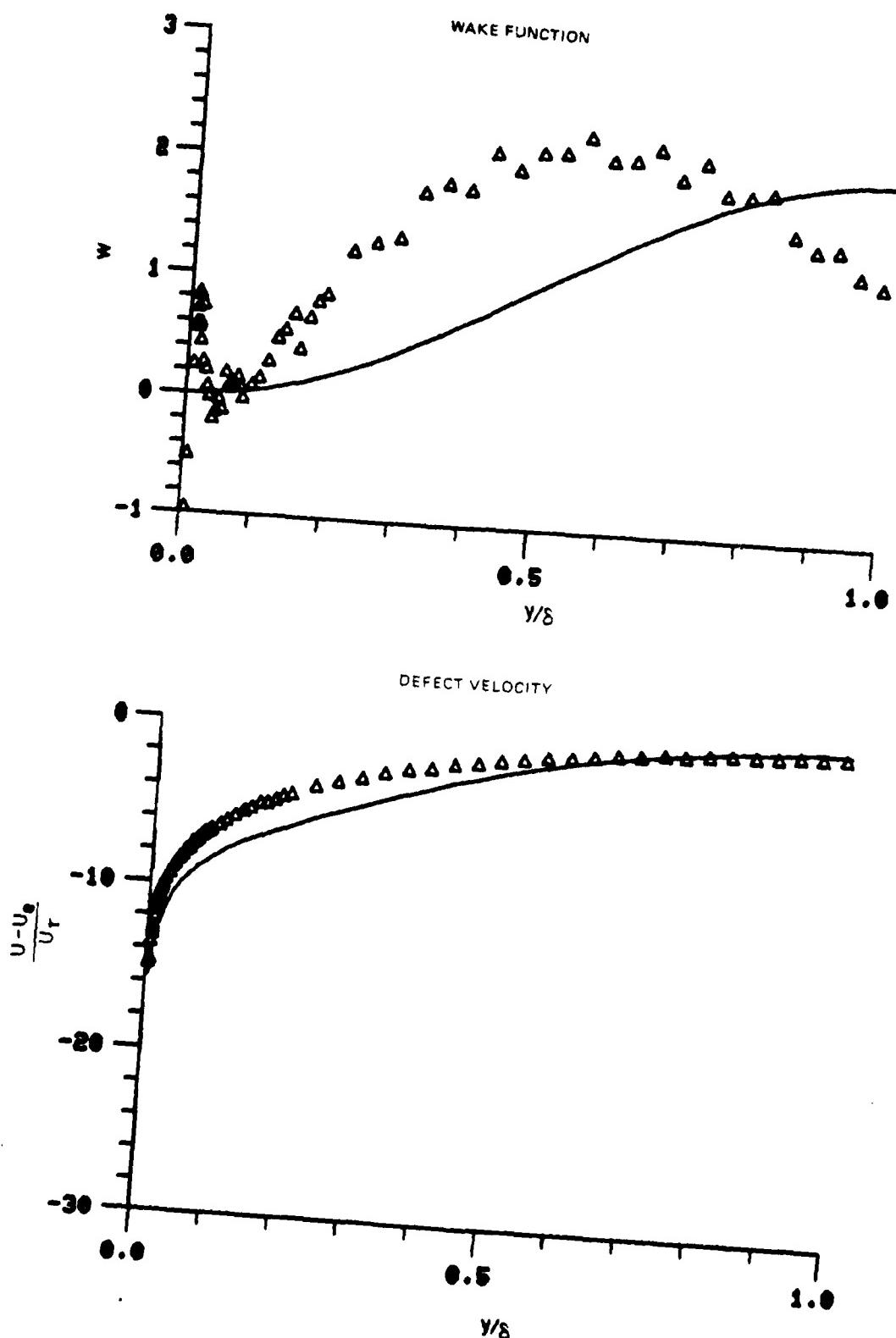


Figure 76. Boundary Layer Velocity Profiles
Run No. 9 Point No. 19

78-12-100-2

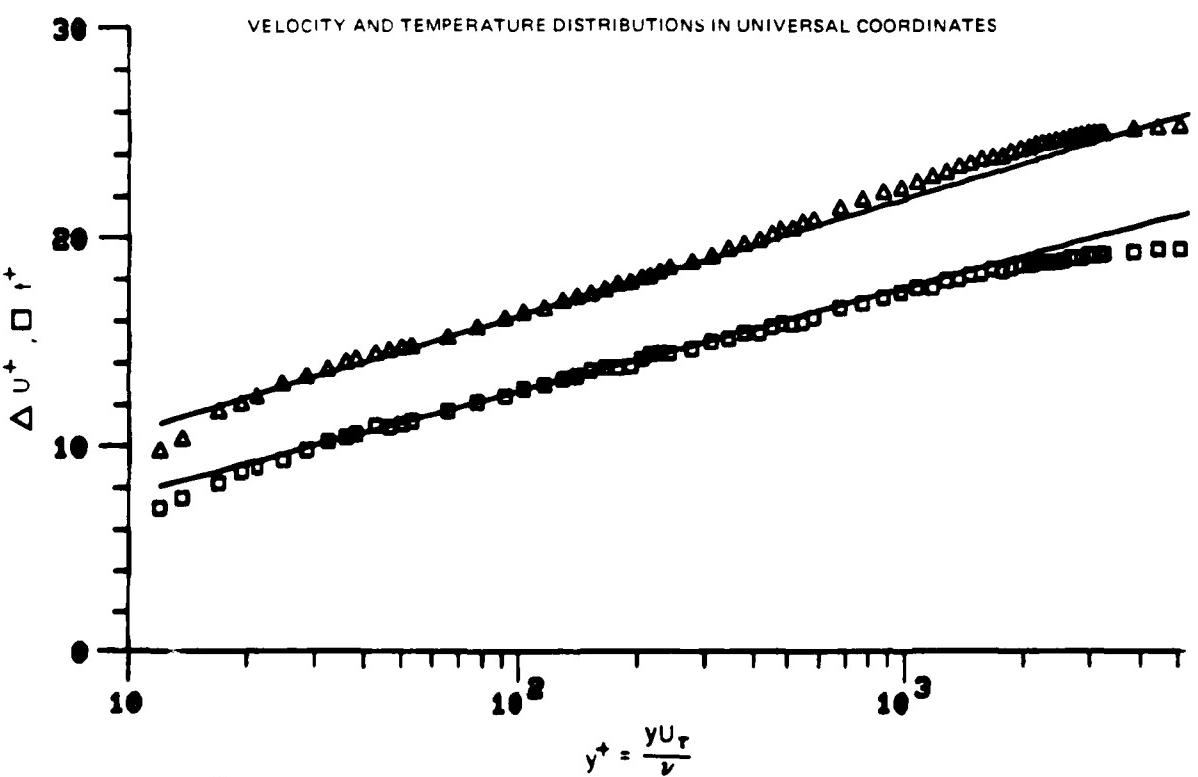
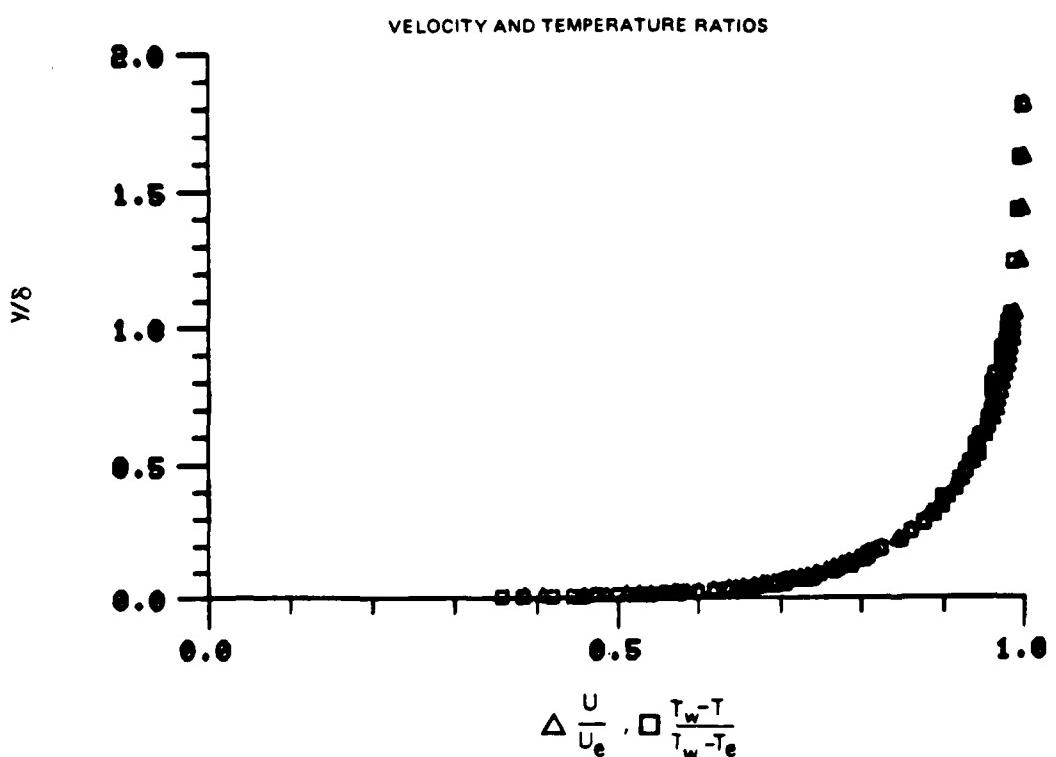


Figure 77. Boundary Layer Velocity and Temperature Profiles
Run No. 9 Point No. 20 78-12-100-1

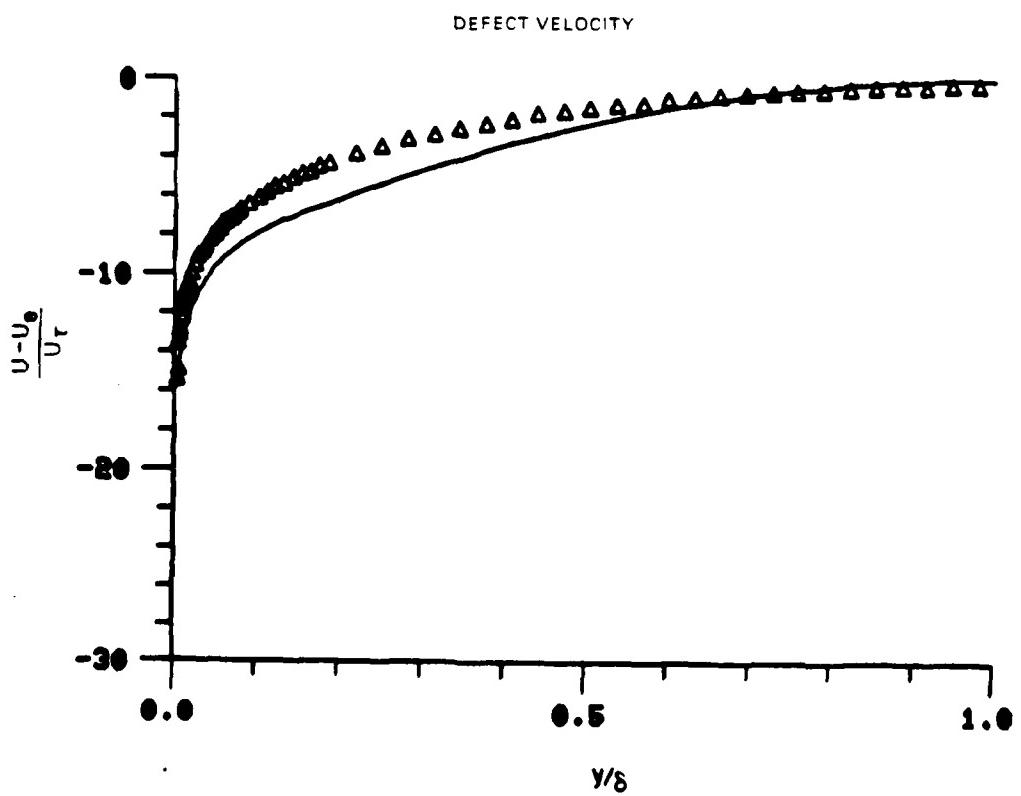
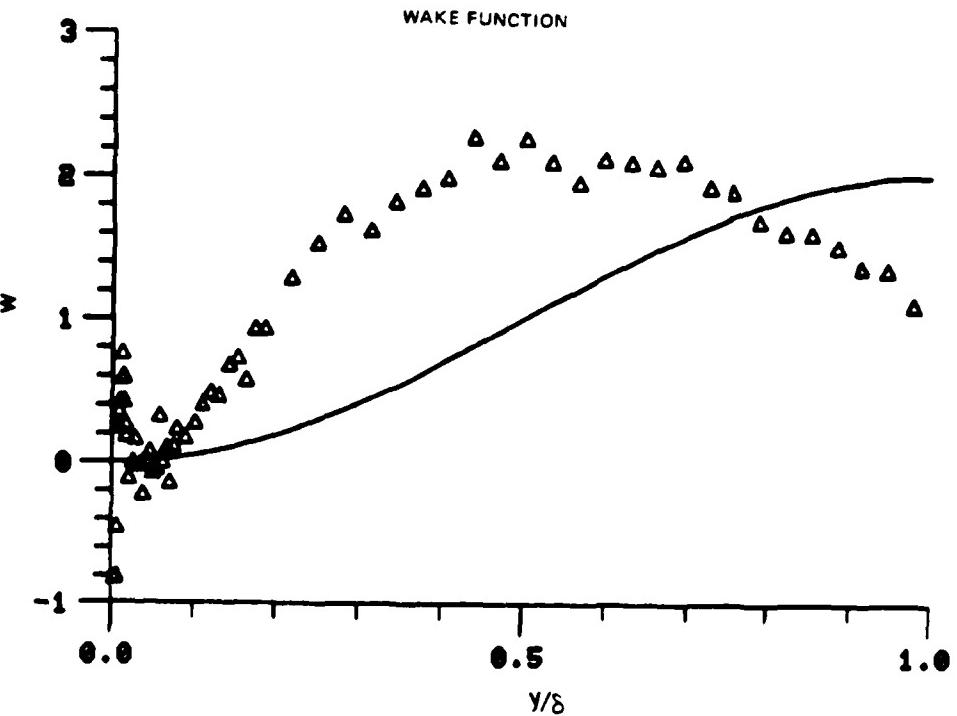


Figure 77. Boundary Layer Velocity Profiles
Run No. 9 Point No. 20

78-12-100-2

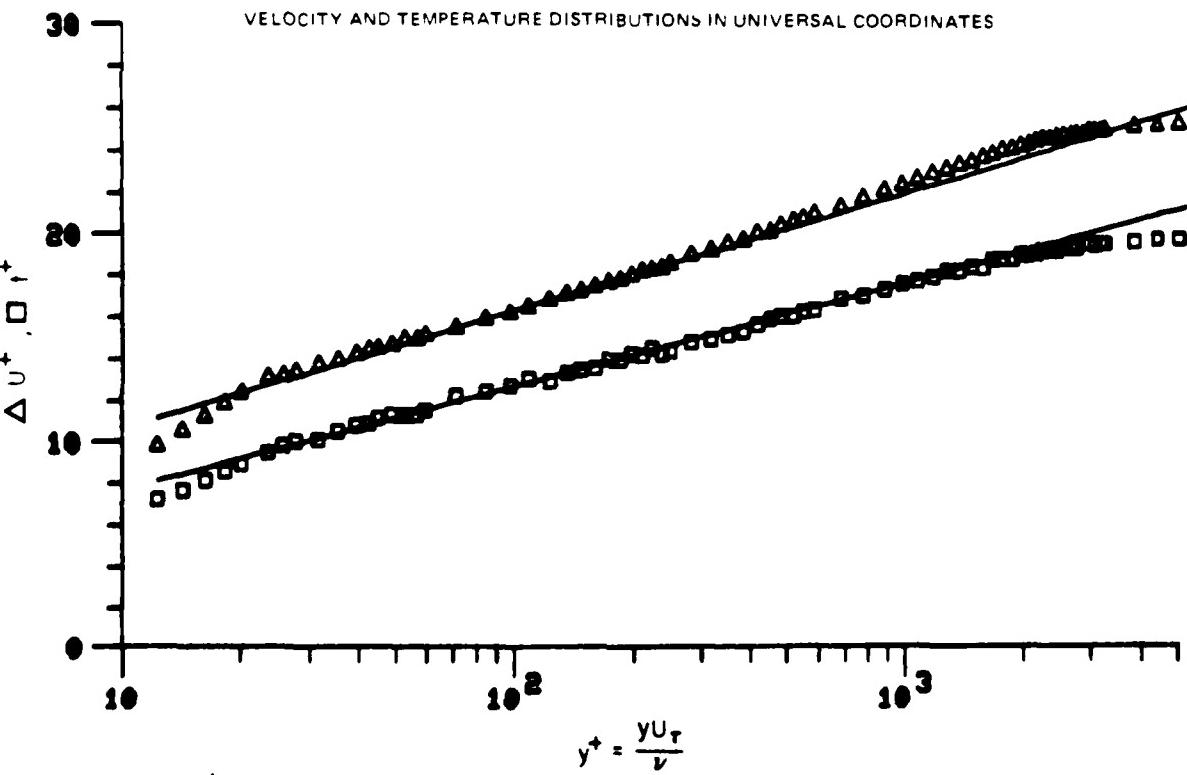
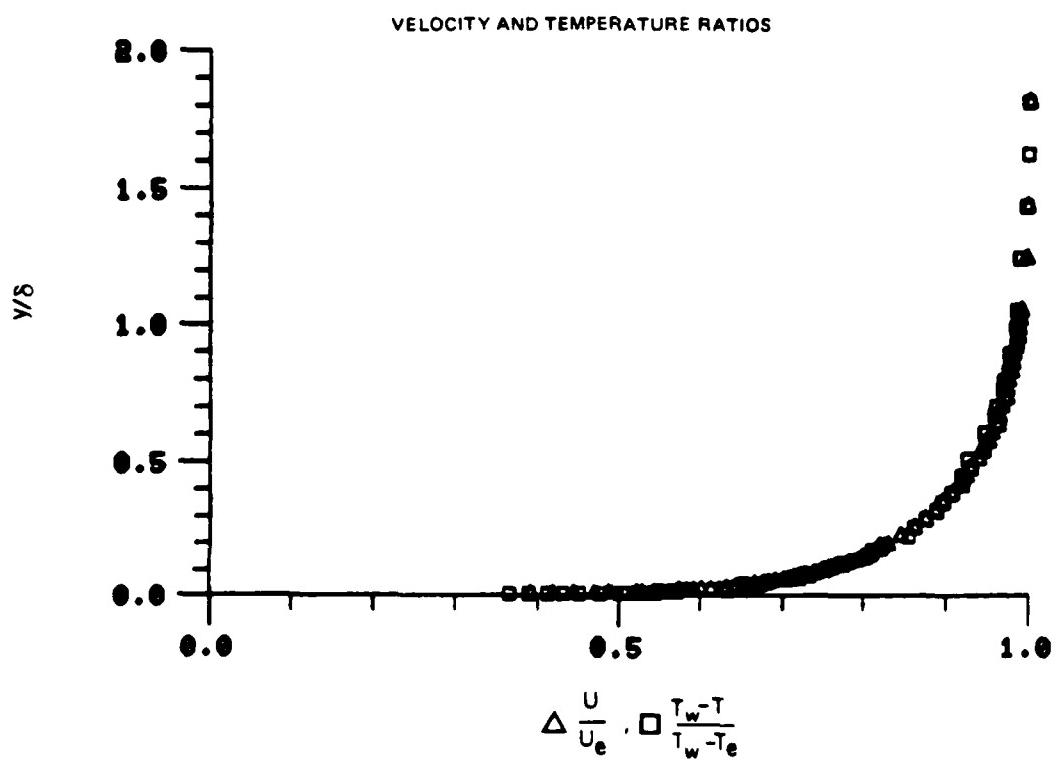


Figure 78. Boundary Layer Velocity and Temperature Profiles
Run No. 9 Point No. 21

78-12-100-1

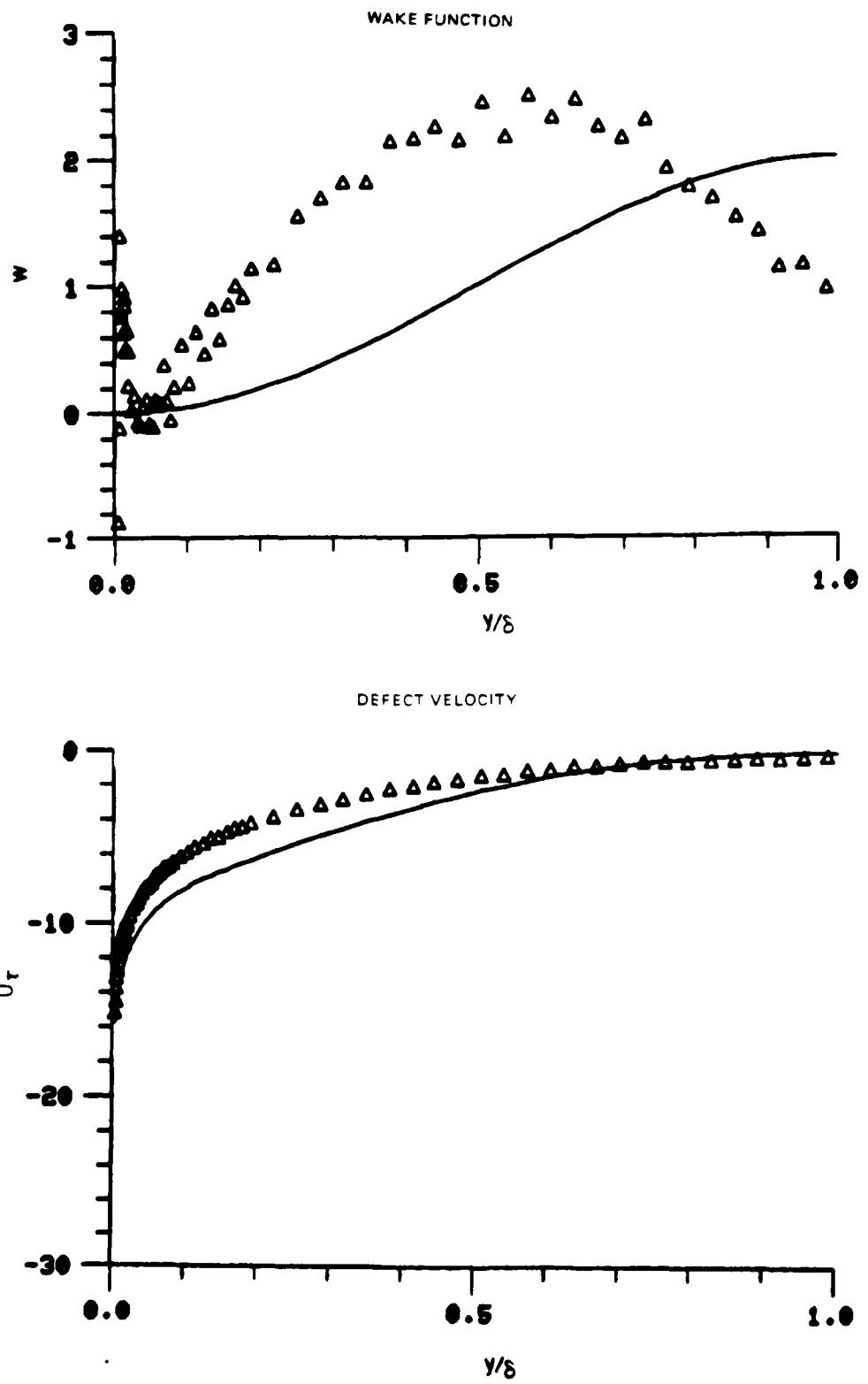


Figure 78. Boundary Layer Velocity Profiles
Run No. 9 Point No. 21

78-12-100-2

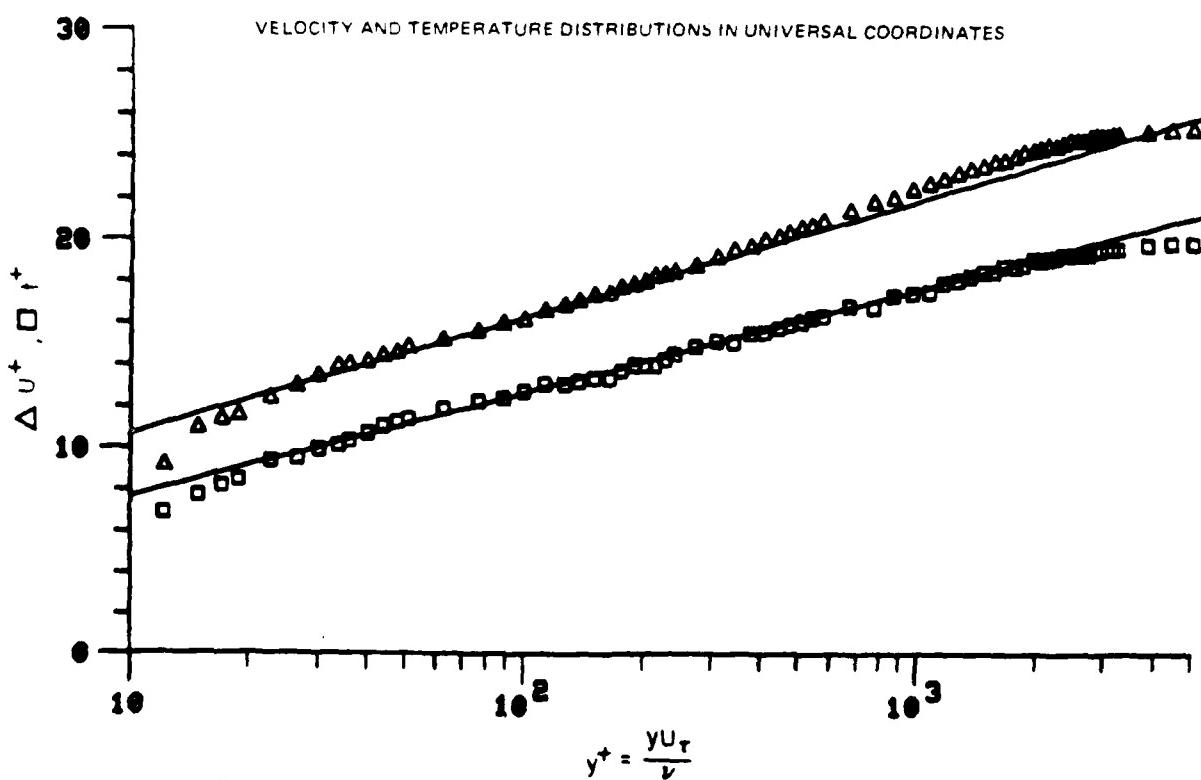
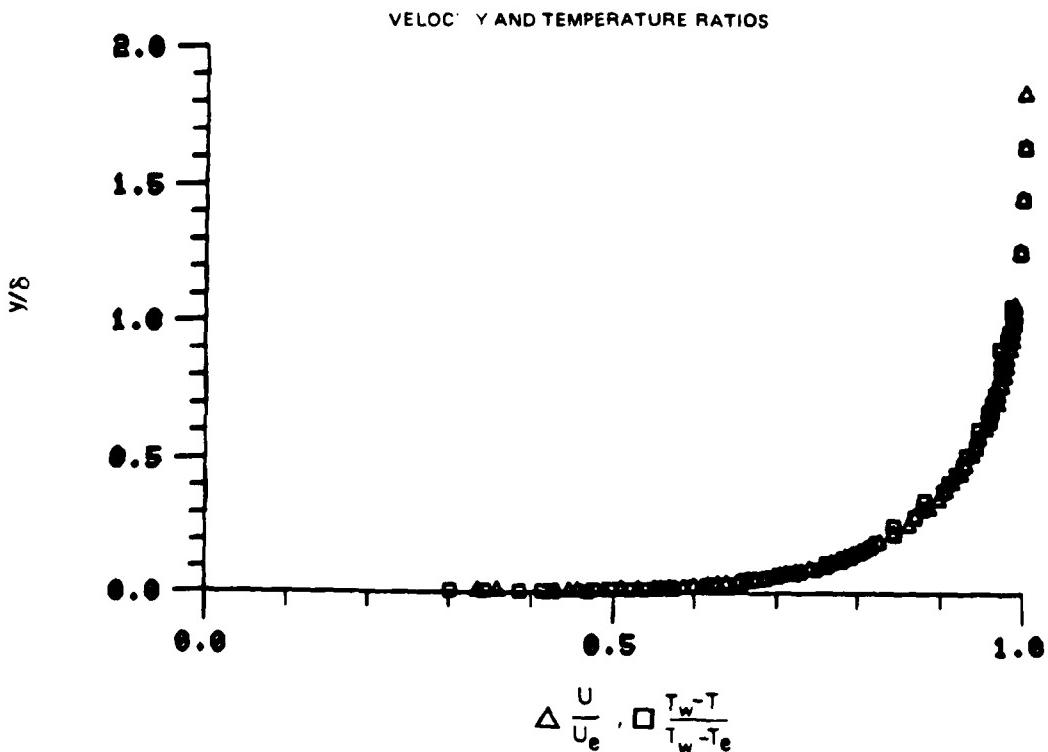


Figure 79. Boundary Layer Velocity and Temperature Profiles
Run No. 9 Point No. 22

78-12-100-1

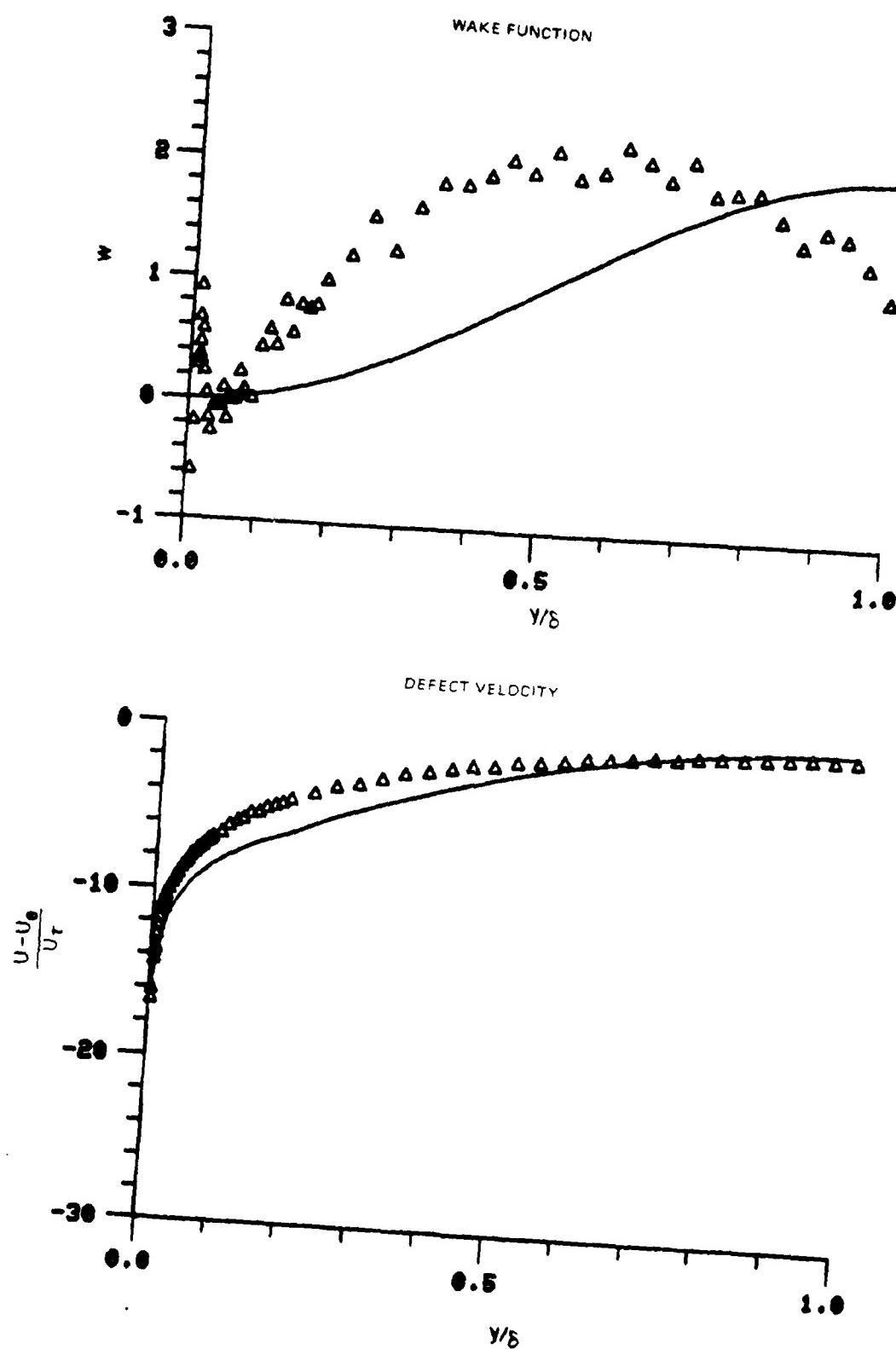


Figure 79. Boundary Layer Velocity Profiles
Run No. 9 Point No. 22

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